



Saidai Duraisamy's

Manidhanaeyam Free IAS Academy

(Run by Manidha Naeyam Charitable Trust)

28, 1st Main Road, CIT Nagar, Chennai - 35 (HO).

Mail Address: manidhanaeyam@gmail.com

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**TNPSC GROUP II & IIA MAIN
WRITTEN EXAM - MODEL TEST
(QUESTION - ANSWER)**

MAIN WRITTEN EXAM DATE : 25-02-2023



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1

UNIT -I -(QUESTION -ANSWER)

6 Marks

1 - 27

12 Marks

27 - 55

15 Marks

55 - 78

2

UNIT -II -(QUESTION -ANSWER)

6 Marks

79 - 100

12 Marks

100 - 128

15 Marks

128 - 163

3

UNIT -III -(QUESTION -ANSWER)

6 Marks

164 - 180

12 Marks

180 - 199

15 Marks

199 - 218

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UNIT-I- (Questions & Answers)

6 MARKS = 6 to 7 POINTS
12 MARKS = 12 to 14 POINTS
15 MARKS = 15 to 17 POINTS

- ✓ எளிமையான வாக்கிய அமைப்பு தேவை
- ✓ நீளமான வாக்கிய அமைப்பை தவிர்க்க வேண்டும்.
- ✓ விடைத்தாளில் கொடுக்கப்பட்ட இடைவெளிக்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ தனித்துவமான விடையை எழுதுவதற்கு பயிற்சி செய்யவும்.
- ✓ கால மேலாண்மையை கருத்தில் கொள்ளவும் 3 மணி நேரத்திற்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ SCERT பாட புத்தகங்களுக்கு அதிக முக்கியத்துவம் கொடுக்கவும், தேவை ஏற்படின் பிற பாட புத்தகங்களையும் பார்க்கவும்.
- ✓ முதன்மை தேர்வு தொடர்பான TNPSC அறிவுறுத்தல்களை கருத்தில் கொள்ளவும்.

(6 MARKS)

1. பரப்பு இழுவிசையின் நடைமுறை பயன்பாடுகள் குறித்து எழுதுக.

Write about the day-to-day applications of surface tension.

- ✓ When a liquid is stationary, it expands to reduce its surface area. The property of a liquid that acts like a recovery film is called surface tension.

Applications:

- ✓ Surface tension is the cause of water uptake in plants.
- ✓ Liquid droplets assume a spherical shape.
- ✓ Due to the surface tension of the water, the water spider walks easily on the surface of the water.
- ✓ During rough seas sailors would pour oil around the ship to reduce surface tension.
- ✓ Longer stay of bubbles in soap suds.
- ✓ Continuous ink flow to the pen tip.

2. கருந்துளை என்றால் என்ன? மற்றும் அதன் பண்புகளை விவரிக்கவும்.

What is black hole? and Describe its characteristics.

- ✓ A black hole is a region of space that has such a strong gravitational pull that nothing containing light can escape.
- ✓ Black holes are considered to be the final stages of the evolution of massive stars. It has no volume or surface area. But due to its enormous mass it has an infinite density.
- ✓ It cannot be seen, however, its existence can be known through the effects it has on objects beyond its horizon.
- ✓ A concept of matter with such a strong gravitational force that even light cannot escape was proposed in 1783 by a British amateur astronomer, Rev. Presented by John Michell.

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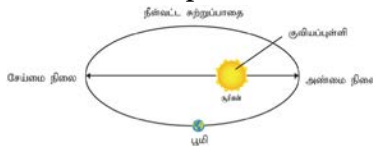
3. கெப்ளரின் கோள்களின் இயக்க விதியை விளக்குக

Explain Kepler's law of Planetary Motion.

- ✓ In the early 1600s Johannes Kepler proposed three laws of planetary motion based on the heliocentric system.

First Law – Law of Ellipses:

- ✓ The planets revolve around the Sun in elliptical orbits, with the Sun at its epicenter.



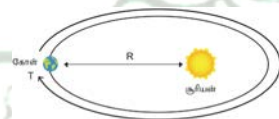
Second Law – Law of Equal Areas:

- ✓ An imaginary line joining the center of the planet and the center of the Sun crosses equal areas in equal times.



Third Law – Law of Consonances:

- ✓ For any two planets, the ratio of the squares of their periods is equal to the ratio of the cubes of their major axis from the Sun.



4. நாசாவின் ஆர்டெமிஸ் மிஷன் பற்றிய குறிப்பை எழுதுக.

Write a note on NASA's Artemis Mission.

- ✓ Artemis 1 will send humans to the moon.
- ✓ The project executing agency is NASA.
- ✓ NASA had already sent humans to the moon 53 years ago with the Apollo spacecraft.
- ✓ At this stage, NASA is going to implement the project of sending a man to the moon in the year 2025, and this Artemis 1 project is the first stage.
- ✓ NASA's new space launch system consists of the SLS rocket, the Orion spacecraft and other systems.

Mission:

- ✓ The Orion spacecraft is equipped with sensors that detect vibrations.
- ✓ Reproduce human tissue to understand the environment of the human journey to the moon.
- ✓ Human body-like toys made of the material have been sent to the moon.
- ✓ The Orion spacecraft is planned to fly within 60 miles of the Moon's surface.
- ✓ In space it will study how radiation in space affects the human body.

5. விடுதல் திசைவேகம் மற்றும் அதன் நடைமுறை பயன்பாடுகள் குறித்து விவரிக்கவும்.

Describe Escape Velocity and its day today Applications.

- ✓ The minimum velocity imparted to an object on the surface of the planet to free it from the force of the planet is called escape velocity.

$$v_e = \sqrt{2gR_E}$$

- ✓ Earth's free velocity is 11.2 kilometers per second.
- ✓ The Sun's escape velocity is 617.5 kilometers per second.

- ✓ Missile Science.
- ✓ Space exploration and travel.

6. தடையின்றி தானே கீழே விழுதலை பற்றி விளக்குக.

Explain Free-Fall.

- ✓ An object falling from above will fall freely when its acceleration is equal to the acceleration due to gravity.
- ✓ In this case the weight of the object is completely reduced and it becomes a vortex state which is known as weightlessness.
- ✓ When an object falls freely on its own, its initial weight is the value of vortex.

Examples:

- ✓ Fast rotating large ratnum.
- ✓ Rolling stock carriage.
- ✓ Astronaut hovering.

7. GMT மற்றும் IST வேறுபடுத்தி காட்டுக.

Differentiate GMT and IST.

Greenwich Mean Time (GMT):

- ✓ This is the time of the Royal Astronomical Observatory at Greenwich, near London, England.
- ✓ It is calculated on the 0° resolution line. The Earth is divided into 24 zones based on equatorial lines spaced 15° apart.
- ✓ These are called Time Zones. The interval between two consecutive time zones is 1 hour.

India Scheme Time (IST):

- ✓ Indian Project Time is calculated based on a line passing through Mirzapur in the state of Uttar Pradesh, India.
- ✓ This line is located on longitude 82.5° (East).
- ✓ $IST = \text{Greenwich Mean Time} + 5.30 \text{ hrs}$

8. அ) சிறுகோள்கள் அ) வால் நட்சத்திரங்கள் பற்றிய சிறு குறிப்பை எழுதுக.

Write short note on a) Asteroids b) Comets

Asteroids:

- ✓ There is a large gap between the orbit of Mars and the orbit of Jupiter.
- ✓ During this interval, millions of rocky fragments (appearing as a band) are orbiting when the planets form. These are called asteroids.
- ✓ Among such planets, Ceres is the largest asteroid. Its diameter is 946 km.

Comets:

- ✓ Comets are objects full of dust and ice that orbit our Sun in a highly elliptical orbit.
- ✓ As they approach the Sun, they evaporate and form a head and tail.
- ✓ Many comets are periodic repeaters.
- ✓ Halley's Comet is one of them. It reappears once every 76 years. It was last seen in 1986. So, it will be visible again in 2062.

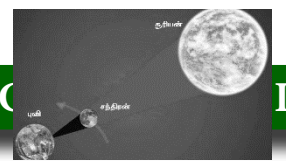
9. சூரிய கிரகணம் மற்றும் சந்திர கிரகணத்தை விளக்குக.

Explain Solar eclipse and lunar eclipse.

- ✓ An eclipse is when the light from one celestial body is partially or totally obscured by the shadow of another celestial body when it passes through it. There are two types of eclipses. They are,

Solar Eclipse:

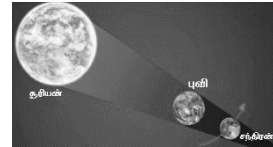
- ✓ A solar eclipse occurs when the Moon is between the Sun and the Earth.
- ✓ Then a small part of the Sun visible from Earth is covered by the Moon.
- ✓ It can be seen only from a small part of the world.



- ✓ Occurs only for a few minutes. Partial solar eclipse is when the moon covers a part of the solar circle.
- ✓ Annular solar eclipse occurs when the Moon passes midway through the Sun.
- ✓ During a total solar eclipse, the moon's shadow completely covers the sun.
- ✓ During a total solar eclipse the outer part of the Sun shines like a halo. We call this phenomenon Diamond Ring.

Lunar eclipse:

- ✓ A lunar eclipse occurs on a full lunar day when the Earth comes between the Moon and the Sun.
- ✓ Earth's shadow dims the moon's light when viewed from Earth.
- ✓ A partial lunar eclipse occurs when the light of the moon is partially obscured by the shadow of the earth.
- ✓ A penumbral lunar eclipse occurs when the Moon passes through the Earth's umbra.
- ✓ A total lunar eclipse occurs when the Earth completely blocks the light of the Moon. Since the moon is very small, this eclipse lasts only for a few hours.



10. மந்த வாயுக்களின் பண்புகள் குறித்து எழுதுக.

Write about the characteristics of Noble Gases.

1. Inert gases are helium, neon, argon, krypton, xiron.
2. Elements like radon in the eighteenth volume.
3. These are called noble gases or inert gases.
4. These are mono atomic elements.
5. They do not react so easily with other substances.
6. These are found in very small quantities.

11. உலோக கலவையின் நடைமுறை பயன்பாடுகள் பற்றி எழுதுக.

Write about the practical Applications of Alloys.

1. An alloy is a combination of two or more metals or metals and non-metals.
2. The properties of an alloy differ from the properties of its constituent metals. Pure gold is the softest metal. Adding a small amount of copper to it increases strength and usability.
 - a. **Fusion of metals:**
Brass is formed by fusing eg: zinc and copper.
 - b. **Pressurization of finely divided metals:**
E.g. wood metal it is an alloy of silicon, silver, bismuth, and cadmium powder.
 - c. **Alloys that are solid solutions:**
A metallic compound can be said to be a solid solution. In this, the concentrated metal is the solvent. Other metals are called solutes.
In a metal solution eg brass, zinc is the solute: copper is the solute.

12. ஏதேனும் இரண்டிற்கு விடை அளிக்க. Attempt any two:

(1) நெய்தல் உப்பு. Neidhal salt.

1. In August, 2022 Tamil Nadu government has started sale of salt under the name Neithal Uppu.
2. The state of Tamil Nadu produces about 8% of the total salt production in India.
3. That means about 24 lakhs of salt is produced in Tamil Nadu.
4. Tamil Nadu is the second largest salt producing state in India after Gujarat.
5. A company called Tamilnadu Uppu Kazhagam sells salt under the name Neithal.

(2) இரைப்பை அமிலம். Gastric Acid.

1. Caustic acid is a major acid secreted by the stomach.
2. Gastric acid is secreted by hydrochloric (HCL) acid.

3. Main use is for quick digestion of foods.
4. It is also used to flush out unwanted toxins from the body and keep the body in good condition.

(3) **அமில நீக்கி. Antacid**

1. An antacid is a substance that balances the acidity of the stomach.
2. It also soothes and relieves chest irritation. Antacids are used to correct occasional chest congestion.
3. Acid removers are of different types.
4. These include sodium bicarbonate, magnesium hydroxide, aluminum hydroxide, calcium carbonate.

13. **அமிலங்களின் பயன்பாடுகளை வரிசைப்படுத்துக.**

List out the uses of Acids.

1. In storage batteries (H₂SO₄)
2. As food preservation (acetic acid)
3. In the preparation of baking powder (tartaric acid)
4. In manufacturing of fertilizers (nitric acid)
5. In making PVC (Poly vinyl chloride) (Hydrochloric acid)
6. As bathroom cleaner (hydrochloric acid)

14. **பிளாஸ்டிக்கின் தீமைகள் பற்றி விவாதிக்க.**

Discuss the disadvantages of plastics.

1. Plastics are non-biodegradable.
2. About 100 to 1000 years but these never decompose.
3. When burning plastic materials, the gases emitted from them mainly release toxic substances called dioxins.
4. It causes great harm to the human body.
2. As they are scaly in nature, they clog waterways and cause environmental problems and sewage problems.
3. Water Levels Rivers mix with them and affect the environment and organisms.
4. Burning plastic can cause various diseases in humans from skin disease to cancer to respiratory tract damage.

15. **நைட்ரஜன் உரம் குறிப்பு தருக.**

Give an account on Nitrogen Fertiliser.

1. Nitrogen Fertilizer refers to one of the most common categories of fertilizers produced out of nitrogen (N) chemical combinations.
2. To be considered as an organic fertilizer, the plant nutrient must contain 5% minimum of nitrogen.
3. Nitrogen is an inert gas representing 78% of the earth atmosphere.
4. As inert gas in the form we breath it, nitrogen has no impact on the environment.
5. But in combination with urea and ammonium to produce urea and ammonia nitrate (ammonia) the nitrogen inert gas becomes an active fertilizer.
6. The chemical transformation of nitrogen into ammonia was discovered in two steps by Fritz Haber in 1918 and Carl Bosch in 1931 for which they were rewarded by a Nobel price.
7. The organic fertilizer is providing the plants with additional carbon.
8. This additional carbon activates the microorganisms of the soil to produce more cells.

16. **“ஒரே நாடு ஒரே உரம் திட்டம்” என்றால் என்ன?**

What is “One Nation One Fertiliser Scheme”?

The scheme is implemented by the Ministry of Chemicals and Fertilizers, Government of India.

1. Commencement: October 2022
2. The main objective of the scheme is to bring the subsidized fertilizers under one name.
3. Bringing fertilizers like Urea, Di Ammonium Phosphate, (NPK) under one name Bharat.
4. It applies to both public and private companies engaged in the sale of fertilizers.
5. Accordingly sale of fertilizers will be done under one name throughout the country.
6. This will prevent sale of same fertilizer under different names at high price.
7. Sale of fertilizer at subsidized rates will be ensured.

17. நிலக்கரியின் வகைகள் பற்றி தெளிவுபடுத்துக.

Elucidate the different types of Coal.

1. Coal is formed millions of years ago. It contains carbon, moisture, sulphur and phosphorus compounds.
2. Types of Coal are Peat, Lignite, Bituminous, and Anthracite.
3. Peat: Coal contains about 40 to 50 percent carbon compounds. These are used for fuel with high moisture content.
5. Lignite: Contains 40 to 60% carbon compounds. It has a moisture content of about 35 percent and is used to generate electricity
6. Bituminous: These contain about 40 to 80 percent carbon compounds. These are used as cooking gas.
7. Anthracite: These are the highest grades of coal containing up to 95 percent carbon compounds. Uses include liquefied petroleum gas [LPG].

18. இரசாயன உணவுப் பாதுகாப்புகள் பற்றி குறிப்பு எழுதுக.

Write a note on Chemical Food preservatives.

Chemical food preservatives contain various artificial chemicals added to food to keep it from spoiling.

Important Chemicals:

1. **Sodium benzoate:** These are mixed in very large quantities of soft drinks.
2. **Sodium metasulphite:** These are mixed in food products like pickle jam.
3. **Sorbic Acid:** These are mixed in bakery products.

Various types of harm are caused by the chemicals mixed in this way.

They mainly contain chemical substances that can harm the human body and cause various diseases.

19. செல்லின் பணிகளை வரிசைப்படுத்துக.

List out the functions of cell.

1. **Cell Wall:** Protects the cell, gives stability and strength to the cell.
2. Aids in cell transport.
3. **Mitochondria:** Produces most of the energy required by the cell.
4. **Pashukanikam:** It contains pigment called pashyam. It attracts sunlight and helps produce food through photosynthesis.
5. **Microbubbles:** It stores food, water and chemicals.
6. **Nucleus:** Acts as the brain of the cell. Coordinates and controls all activities of the cell.
7. **Nucleus coat:** surrounds and protects the nucleus. Transports substances in and out of the nucleus.

20. குறைந்தபட்ச உணவு தேவை என்றால் என்ன? மற்றும் பரிந்துரைக்கப்பட்ட உணவுச்சத்து அளவை வரையறுக்க.

What do you mean by Minimal Nutritional Requirement (MNR)? and define Recommended Dietary Allowance (RDA).

1. Minimum Dietary Requirement This refers to the minimum nutritional requirements for the human body.
2. It tells about the requirement of each type of nutrition and its levels.
3. Calculating how much nutrients an average human body needs in a day is the Minimum Nutrient

Requirement.

4. Recommended Nutrient Intake is the amount of nutrients that an average human being can take for physical activity.
5. A person is basically the amount of nutrients required for the body to function.
6. It also protects against various diseases.
7. Being born with a defect protects against hereditary diseases and other infections.

21. பூஞ்சைகளின் பயன்களை வரிசைப்படுத்துக.

List out the uses of fungus.

1. It is used for bakery products.
2. Used for food processing.
3. It is an important ingredient of citric acid.
4. Antibiotics like penicillin are produced by it.
5. It is used for various types of studies.
6. Mushrooms are high in protein and belong to the genus Punctaria.
7. Widely used to prepare antimicrobials.

22. பாக்டீரியா, வைரஸ் மற்றும் பூஞ்சைகள் ஏற்படுத்தும் நோய்கள் குறித்து எழுதுக.

Write about bacterial, viral and fungal disease.

Bacterial diseases:

1. It is called single organism.
2. It is transmitted to humans and from humans to animals.
3. It is spread by touching unclean objects and eating unhygienic food.
4. Through which tuberculosis is spread.

Viral diseases:

1. Smaller in size than bacteria.
2. It spreads from infected humans or animals to others.
3. Mainly diseases like HIV AIDS can be said.

Fungal diseases:

1. Can be caused by fungi.
2. Mainly present in soil, plant, air etc.
3. Caused by fungi it can be transmitted from humans to animals.

23. பல்வேறு வகையான வாழ்க்கை முறை நோய்கள் யாவை?

What are the different types of lifestyle diseases?

Cardiovascular Diseases:

1. It is caused by consuming too much fatty food.
2. Fatty blockage inside the heart causes damage.
3. It can lead to heart attack.

Diabetes:

1. Uncontrolled diet.
2. It is caused by overweight, mechanical lifestyle etc

Cancer:

1. Alcohol, uncontrolled diet.
2. Consuming high fat foods.
3. Processed foods.
4. Also environmental impurity can cause cancer.
5. Respiratory disorder caused by unhygienic air like tobacco.

6. This type of respiratory problem is caused by air pollution.

24. புரத குறைபாட்டினால் குழந்தைகளுக்கு ஏற்படும் நோய்கள் குறித்து எழுதுக.

Write about protein deficiency diseases among children?

1. Diseases caused by protein deficiency in children.
2. Height deficiency.
3. Overweight.
4. Diseases such as low immunity will occur.
5. It is caused by inadequate or inadequate intake of protein.
6. It can make the growth of the child less likely to weaken the immune system.
7. Eat high protein foods like meat, fish, eggs, pulses.

25. வெளிச் சேதனை முறை கருக்கப்படல். In vitro fertilization (IVF).

1. It means laboratory In vitro fertilization.
2. The process of embryo implantation outside the body.
3. It is artificial insemination.pioneer in addressing child malnutrition through such programs.
4. It has four stages
 1. Egg retrieval, donor
 2. Embryo feeding,
 3. Embryonic development
 4. Embryo transfer

26. மனித சுவாச மண்டலத்தின் பல்வேறு குறைபாடுகள் பற்றி எழுதுக.

Write about the various disorders of Human Respiratory system.

1. Asthma (Asthma)

1. Bronchial tubes and bronchioles are narrowed and their walls are inflamed in asthmatic patients.
2. This makes breathing difficult.

2. Emphysema (Lung Obstruction)

Emphysema refers to a condition of chronic shortness of breath. The disease is caused by the gradual deterioration of the thin walls of the air sacs, reducing the respiratory surface for gas exchange.

3. Bronchitis

The bronchial tubes that connect the trachea to the lungs become inflamed due to smoke pollution and smoking.

4. Pneumonia

An inflammation of the lungs caused by bacterial or viral infections is called pneumonia or colds.

5. Tuberculosis

1. This disease is caused by the bacterium Mycobacterium tuberculae.
2. The infection affects the lungs and bones. Fluid accumulation between the chest and lungs is a major complication of this disease.

27. சுவாச அமைப்பின் செயல்பாட்டை விவரிக்க.

Explain Mechanism of Breathing System.

1. Respiration is the exchange of air between the atmosphere and the lungs.
2. This event takes place in two stages namely inhalation and exhalation.
3. Inhalation refers to the movement of air from the atmosphere into the lungs and exhalation refers to the movement of gas from the air sacs out of the lungs.
4. Ligaments are not found in the lungs. But these are contracted and expanded by the movement of the rib muscles and diaphragm.
5. The diaphragm separates the thorax from the abdomen.
6. Diaphragm in normal position is found to be convex upwards. The intercostal muscles move the ribs.

7. A pressure difference is created by the external costal muscles, internal costal muscles and the diaphragm.

28. இரத்தத்தின் பல்வேறு செயல்பாடுகளை விவரி.

Describe the various functions of Blood.

1. Transports respiratory gases (oxygen and CO₂)
2. Transports digested food to all cells.
3. Transmits hormones.
4. Transports nitrogenous waste products like ammonia, urea, uric acid etc.
5. Protects the body from infection.
6. Acts as a buffer to regulate body temperature and pH.
7. Maintains body water balance.

29. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) இ.சி.சி. ECG.

1. An electrocardiogram (ECG) is a device that records electrical changes in the heart over time.
2. Electrical potentials are recorded by placing electrodes on the skin, arms, legs and chest.

(ii) CT ஸ்கேன். CT SCAN

1. It is also known as computed tomography scan.
2. It is a medical imaging technique used in radiology that non-invasively obtains detailed images of the body for diagnostic purposes.
3. CT scanners use a rotating X-ray tube and an array of detectors placed on a gantry to measure the X-ray attenuations of various tissues in the body.
4. Multiple x-ray measurements taken at different angles are processed in a computer using reconstruction algorithms to produce tomographic (cross-sectional) images (virtual "slices") of a body.
5. The use of ionizing radiations sometimes restricts its use due to its adverse effects.

(iii) எக்கோ ஸ்கேன். ECHO SCAN

1. Echocardiography is an ultrasound of the heart.
2. It is used to visualize the movement and function of heart muscles and valves.
3. With echocardiography, doctors can learn about the size, shape, and movement of your heart muscle, how your heart valves work, how blood flows through your heart, and how your arteries work.

Workings:

1. Echocardiography uses high-frequency sound waves (also called ultrasound) to provide a moving picture of your heart.
2. Sound waves are transmitted through the body through a device called a transducer.
3. Sound waves bounce off the heart and echo back to the transducer.
4. The echoes are converted into images on a television monitor to create images that move your heart.

30. அபீனல் சுரப்பி மற்றும் அபீனல் கோர்டெக்ஸ் பற்றிய குறிப்பு தருக.

Give an account on Adrenal Gland and Adrenal Cortex.

Adrenal gland:

1. Adrenal glands are located on top of each kidney.
2. These are also called suprarenal glands.
3. Its outer part is called adrenal cortex and inner part is called adrenal medulla.
4. These two areas differ in structure and functions.

Adrenal Cortex:

1. Adrenal cortex is composed of three cell layers.
2. They are zona glomerulosa, zona fasciculata and zona reticularis.

31. மேம்பட்ட ரோபோடிக் அறுவை சிகிச்சை என்றால் என்ன?

What is Advanced Robotic Surgery?

1. An Advanced Robotic Surgery Center has been established at a cost of Rs 34.60 crore by the Department of Health and Family Welfare.
2. Robotic surgery is an advanced technique of laparoscopy.
3. Three-dimensional visualization is necessary to protect and control blood vessels, which is possible in robotic surgery.
4. In endo wrist in robotic surgery, rotation is up to 360 degrees.
5. Less scars on patients' body during robotic surgery, blood loss, pain and post-operative infection can be controlled and pain-relieving injections are not required.
6. Robotic surgery is very useful for kidney surgery and bowel movement and early cancer and heart surgery.

32. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) UMANG (புதிய கால நிர்வாகத்திற்கான ஒருங்கிணைந்த மொபைல் பயன்பாடு).

UMANG (Unified Mobile Application for New-age Governance).

1. This app is developed by the Union Ministry of Electronics and Information Technology.
2. This app is available in different regional languages.
3. This app works in about 13 languages.
4. The central government has launched this app for citizens to get all kinds of government services at a single platform.
5. Its main services are Aadhaar related services, digital locker services system.
6. Citizens can avail services of Labor Provident Fund through this app.
7. Aadhar can apply for Permanent Account Number.
8. The Prime Minister can make an application under the Kausalya Act.

(ii) RAS (விரைவான மதிப்பீட்டு அமைப்பு).

RAS (Rapid Assessment System).**Quick Assessment System:**

1. It is developed by the Union Ministry of Electronics and Information Technology.
2. Part of the National Electricity Service.

Purpose:

1. It is designed to express the views of the public on the quality of various electronic services provided by the government.
2. It is also used to get various types of feedback on the services provided by the government.
3. The government used this system mainly to get information and feedback regarding those who were vaccinated during the Corona pandemic.
4. And will continue to provide relevant information to the persons who can avail the services of the Government.

(iii) myScheme.

1. It is formed as a part of National Electricity Governance.
2. It is developed to inform general public about information related to innovation and technology-oriented projects.
3. This platform is used for public to know about various schemes and services of Govt.

4. It is implemented in collaboration with the Central Department of Electronics and Information Technology, Reforms and Grievances and State Governments.

33. உயிர் வலுவூட்டல் என்றால் என்ன? அதன் பயன்களை விவரிக்க.

What is Bio- Fortification? Explain its benefits.

1. Increasing nutritional value of food crops.
2. Increasing the density of vitamins and minerals in a crop.
3. Conventional plant breeding, agronomic practices or biotechnology.

Benefits:

1. Health improvement in the people.
2. Resilient to diseases, pests, droughts, etc
3. Provide better yields.
4. Alternative to iron supplements.
5. Affordable and ensure nutritional security
6. Alternative then introducing GM crops

34. மரபணு மாற்றம் செய்யப்பட்ட பயிர்களின் சாதக பாதகங்களை வரிசைப்படுத்துக.

List out the Advantages and Disadvantages of genetically modified crops.

Advantages:

1. Higher yields and self sufficiency
2. It reduces the use of pesticide and insecticide
3. It can produce more in small area of land.
4. India introduced Bt cotton seeds in 2002.

Disadvantages:

1. Damage ecosystem
2. Increase the cost of cultivation
3. Human health risk.

35. 'மரபணு பொறியியல் மதிப்பீட்டுக் குழு' - விவரிக்க.

'Genetic Engineering Appraisal Committee' - Explain.

1. The Genetic Engineering Appraisal Committee (GEAC) Ministry of Environment, Forest and Climate Change (MoEF&CC).
2. Chairman - Special Secretary/Additional Secretary of MoEF&CC co-chaired by a representative from the Department of Biotechnology (DBT).

Functions:

1. Allows for commercial release of GM crops.
2. It is responsible for the appraisal of activities involving large-scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
3. It is also responsible for the appraisal of proposals relating to the release of genetically engineered (GE) organisms and products into the environment including experimental field trials.
4. The committee or any persons authorized by it has powers to take punitive action under the Environment Protection Act.

36. DNA மற்றும் RNA வேறுபடுத்துக.

Differentiate RNA and DNA.

DNA:

1. It is a long polymer. It has a deoxyribose and phosphate backbone having four bases- thymine, adenine, cytosine and guanine.
2. It is located in the nucleus of a cell and in the mitochondria.

3. It has 2-deoxyribose
4. The function of DNA is the transmission of genetic information. It acts as a medium for long-term storage.

RNA:

1. Is a polymer with a ribose and phosphate backbone with four varying bases: uracil, cytosine, adenine and guanine.
2. It is found in the cytoplasm, nucleus and in the ribosome.
3. It has Ribose
4. RNA is critical for the transmission of the genetic code that is necessary for protein creation from the nucleus to the ribosome.

37. பல்வேறு வகையான உணவுப் பாதுகாப்பு முறைகளை விளக்குக.

Explain Different types of Food Preservation Methods.

(i) **Traditional techniques:**

Fermentation:

Fermentation is the microbial conversion of starch and sugars into alcohol. It makes foods more nutritious and palatable.

Pickling:

Pickling is a method of preserving food in an edible antimicrobial liquid. It is of two types: chemical pickling and fermentation pickling.

Boiling:

Boiling liquid food items kill all the microbes. Eg. Milk and Water.

(ii) **Modern techniques:**

Pasteurization:

1. It is a process for preservation of liquid food.
2. Milk is preserved by this method.
3. It is heated up to 70 °C to kill the bacteria and it is cooled to 10 °C to prevent the growth of remaining bacteria.

38. தமிழ்நாடு வாழ்க்கை அறிவியல் ஊக்குவிப்புக் கொள்கை -2022 பற்றிய குறிப்பு தருக.

Give an account on Tamil Nadu Life Science Promotion Policy – 2022.

1. The Life Science policy aims to attract Rs.20,000 crore investment and generate nearly 50,000 jobs to boost employment opportunities by 2030.
2. Most of whom can choose to become a researcher in biologics or work in biosimilars and medical technology.
3. Transform Tamil Nadu into the most preferred destination for researchers in biologics, biosimilars, and medical technology.
4. Enhance the existing ecosystem by making it more conducive for the units to operate, produce and move higher in the value chain.
5. Improve ease of doing business for Life Sciences firms.
6. Build local production capacities and increase import substitution of Biologics and Biosimilars products, and cutting-edge medical equipment.

39. விரிவாக்கப்பட்ட தயாரிப்பாளர் பொறுப்பு.

Extended producer responsibility.

1. Union Ministry of Environment, Forest and Climate Change.
2. Under the Plastic Waste Management Rules, 2016 the responsibility of manufacturers on plastic packaging has been extended.

3. Extended Producer Responsibility (EPR) is a producer's lifetime responsibility for the environmental friendliness of the product (plastic packaging).
4. India first introduced EPR in 2011.
5. Under the Plastic Waste (Management and Handling) Rules, 2011,
6. E-Waste Management and Handling Rules, 2011.

Three categories of plastic packaging include:

1. Rigid plastic
2. Flexible plastic packaging of one layer or multiple layers (more than one layer of different types of plastic), plastic sheets and covers made of plastic sheets, carry bags (including bags made of biodegradable plastics), plastic bags or pouches
3. Multi-layer plastic packaging consists of at least one layer of plastic and at least one layer of non-plastic material.

Challenges:

- a. Consumer awareness
- b. Incompatibility
- c. Large scale involvement

40. சுற்றுச்சூழல் பாதிப்பு மதிப்பீடு.

Environmental impact assessment.

1. EIA – Environmental Impact Assessment
2. Introduced – 1978
3. Under the provisions of the Environment (Protection) Act, 1986.

Objectives:

1. To come up with a national policy to promote productive and happy harmony between man and environment.
2. To promote efforts to prevent or eliminate damage to the environment.
3. To increase understanding of ecosystems and natural resources important to the nation
4. Screening
5. Scoping
6. Basic data collection
7. Impact assessment
8. Evaluation of Alternatives, Mitigation Measures & Environment, Impact Assessment Report
9. Public Inquiry
10. Decision Making
11. Monitoring of permit conditions
12. Category A projects require mandatory environmental clearance so that they do not undergo the screening process.
13. Category B projects are classified into two categories subject to screening process.
14. Category B, Projects (mandatory EIA required).
15. Category B2 Projects (No EIA required).
16. Thus, Category A projects and Category B projects undergo the full EIA process, whereas B2 projects are excluded from the full EIA process.

41. 'தேசிய காசநோய் ஒழிப்புத் திட்டம்' – விளக்குக.

'National TB Elimination program' – Explain.

1. Pradhan Mantri TB Mukta Bharat Abhiyan
2. Ministry of Health and Family Welfare (MOHFW)
3. Eliminating TB by 2025

4. Global target - 2030.
5. TB is spread from person to person through the air. When people with TB cough, sneeze or spit, they propel the TB germs into the air.
6. Symptoms: Cough with sputum and blood at times, chest pains, weakness, weight loss, fever and night sweats.
7. TB is a treatable and curable disease.
8. Nikshay Poshan Yojana, nutritional support is extended to all TB patients for the entire duration of their treatment.

42. போதைப்பொருள் துஷ்பிரயோகம் மற்றும் அதன் தீய விளைவுகளை விளக்குக.

Explain Drug Abuse and its ill effects.

1. Dependence on alcohol is called alcohol addiction and addiction is called alcohol addiction.
2. It is called misuse of alcohol. Alcohol consumption impairs one's physical, physiological and psychological functions.
3. Affects the nerve cell and causes various mental and physical disturbances.
4. Reduces coordination of body parts.
5. Dilation of blood vessels affects heart function.
6. The body loses its control and self-awareness and causes health disorders and eventually death.

43. வைட்டமின் டி மற்றும் அதன் முக்கியத்துவம் பற்றி எழுதுக.

Write about Vitamin D and its Significance.

1. Vitamin D (Calciferol)
2. Produced from eggs, liver, dairy products, fish, skin exposed to sunlight.
3. Rickets (seen in children)
4. Crotch legs, defective breastbones, pigeon chest development.

44. மனித உடலின் நுண்ணூட்டச்சத்துக்கள் மற்றும் அதன் வகைகள் யாவை?

What is Micro Nutrients of Human Body and its types?

Iron:

1. Spinach, dates, greens, broccoli, whole grains, nuts, fish, liver
2. Acting as an essential component of hemoglobin.
3. Anemia

Iodine:

1. Milk, seafood, common salt
2. Production of thyroid hormone
3. Anterior neck (goiter)

45. முதலமைச்சரின் பெண் குழந்தைகள் பாதுகாப்புத் திட்டத்தை விவரிக்க.

Describe Chief Minister's Girl Child Protection Scheme.

1. The Girl Child Protection Scheme is
2. Aimed at preventing gender discrimination
3. Eradicating infanticide
4. Empowering
5. Protecting rights of girl Children
6. Direct financial investment by Government

Scheme-I

An amount of Rs. 50,000 is deposited in the name of the form of fixed deposit with the Tamil Nadu Power Finance and Infrastructure Development Corporation Limited, for a family with one girl child only.

Scheme-II

An amount of Rs. 25,000 is deposited in the names of two girl children Tamil Nadu Power Finance and Infrastructure Development Corporation Limited, for a family with two girl children only.

46. கட்டிகள் (Vector) வழியாக பரவும் பல்வேறு நோய்களை பற்றி விளக்குக.

Explain the various Vector Borne Diseases.

Malaria:

1. It is caused by Plasmodium, a protozoan parasite.
2. Plasmodium vivax, Plasmodium malariae, Plasmodium falciparum and Plasmodium ovale are its types. Among these, Plasmodium falciparum is the most virulent and fatal.
3. Worldwide, approximately 300 million (30 crore) people suffer from malaria each year. It is a highly fatal but curable disease for humans.
4. The disease is transmitted by the Anopheles mosquito, a female mosquito that feeds on human blood and can live for less than ten days.

Chikungunya:

1. Chikungunya is caused by a single stranded RNA virus.
2. The disease is transmitted by an infected Aedes aegypti mosquito that bites humans during the day.
3. The incubation period of this virus is 2 to 12 days. Common symptoms of this disease include chills, high fever, vomiting, fainting, headache, persistent joint pain and difficulty walking.

Dengue:

1. Dengue is also known as 'bone breaking' fever.
2. It was given the name of fracture fever due to severe pain in the joints and ligaments caused by the screw system.
3. The incubation period of the virus for this disease is 5-6 days.
4. High fever, severe headache, muscle and joint pain (bone fracture fever), itching and bleeding.
5. Symptoms associated with this disease include low platelet count. Vomiting and abdominal pain, difficulty breathing, tiny spots on the skin.

Filaria:

1. Filaria is an important health problem in India.
2. The disease is caused by the nematodes Ucheraria pancropti. The mature worms are usually found in human lymph nodes. It is transmitted by the bite of the Culex mosquito.
3. The incubation period of filarial worms is 8-16 months. Symptoms of acute infection, fever and swollen lymph nodes emerge during this period.

47. ஏதேனும் மூன்றிற்கு விடை அளிக்க: Attempt any three:

(i) சிசு இறப்பு விகிதம் (IMR)

Infant Mortality Rate (IMR)

1. It is the death of children before reaching the age of 1 year.
2. This is measured by the infant mortality rate (IMR), which shows the deaths of children under one year of age per 1000 live births.
3. The IMR has also been reduced to 27 (as of 2021) compared to 58 in 2005.
4. Highest – madya pradesh -46
5. Lowest -mizoram ,nagaland -3

(ii) தாய்மரங்கள் இறப்பு விகிதம் (MMR)

Maternal Mortality Rate (MMR)

1. Maternal Mortality Ratio (MMR) is defined as the number of maternal deaths during a given time per 1, 00,000 live births during the same time.

2. Target- United Nations Sustainable Development Goals target of 70/ lakh live births by 2030.
3. Lowest – kerala (19)
4. Highest -Assam (195)

(iii) பிளாஸ்மா சிகிச்சை

Plasma Therapy

1. Convalescent plasma (CP) therapy
2. Age-old concept of passive immunity.
3. The convalescent plasma therapy seeks to make use of the antibodies
4. Developed in the recovered patient against the coronavirus.
5. Plasma is then injected in critically ill patients
6. The antibodies are transferred and boost their fight against the virus.
7. Time Period for Infusion:
8. Covid patient usually develops primary immunity against the virus in 10-14 days.
9. The treatment could be effective for patients in the age group 40-60
10. Low effective for people aged beyond 60 years.

(iv) மிஷன் இந்திரதனுஷ் 4.0

Mission Indhradhanush 4.0

1. Health mission of the Government of India
2. Launched - 2014.
3. The scheme this seeks to drive towards 90% full immunisation coverage of India and sustain the same by year 2022.
4. The Mission Indradhanush aims to cover all those children who are either unvaccinated, or are partially vaccinated against vaccine preventable diseases
5. IMI 4.0 aims to fill gaps in the routine immunisation coverage of infants and pregnant women hit by the Covid-19 pandemic and also aims to make lasting gains towards Universal Immunization.
6. UIP provides free vaccines against 12 life-threatening diseases,
7. Like Diphtheria, Whooping cough, tetanus, polio, tuberculosis, hepatitis B, meningitis and pneumonia, Haemophilus influenzae type B infections, Japanese encephalitis (JE), rotavirus vaccine, pneumococcal conjugate vaccine (PCV) and measles-rubella (MR).

48. வனம் சார்ந்த சுற்றுச்சூழல் என்றால் என்ன?

What is forest ecosystem?

1. A forest ecosystem is an ecosystem of forests and resources.
2. Forests are renewable natural resources. Forests are formed by a group of plants that are structurally defined by their trees, shrubs, herbs, climbers, and ground cover.
3. Soil, animals, insects, microorganisms, and birds are the most important interacting units of a forest ecosystem.
4. In India, the forests occupy about 18-20% of the total land Area.
5. Abiotic Components of the forest include inorganic and organic components present in the soil along with temperature, rainfall, light, etc.
6. Biotic Components are represented by producers, consumers, and decomposers.

49. புல்வெளி சுற்றுச்சூழல் எவ்வாறு பாதுகாக்கப்படுகிறது?

How does the grassland ecosystem be conserved?

1. Grassland ecosystem is one in which grasses and other herbaceous (non-woody) plants dominate the vegetation.
2. As grassland ecosystems are dominated by grass with few or no trees in the area where there is not enough forest and too much forest.
3. It is also known as a transitional landscape. Grasslands are present on every continent except Antarctica and in almost every ecoregion on the planet.
4. Protect and restore wetlands, which are an important part of grassland ecology.
5. Rotate agricultural crops to prevent the sapping of nutrients.
6. Plant trees as windbreaks to reduce erosion on farm fields.

50. பாலைவன சுற்றுச்சூழல் எதிர்கொள்ளும் அச்சுறுத்தல்கள் யாவை?

What are the threats to the desert ecosystem?

1. The desert ecosystem is one of the world's most important ecosystems
2. The desert ecosystem covers around 17% of the earth's surface.
3. Deserts can be found on almost every continent. Desert ecosystems thrive in locations with relatively little annual rainfall and extreme heat or cold.
4. The desert ecosystem's initial productivity is quite poor.
5. Each year, the desert receives less than 50 cm of rain. It is a big barren abandoned and dry sand-covered region.
6. Deserts are of two types namely: Hot Deserts and Cold Deserts.

51. பல்லுயிர் பெருக்கத்தின் முக்கியத்துவத்தை விளக்குக.

Elucidate the Significance of Biodiversity.

Significance of Biodiversity:

1. Biosphere is a life supporting system to the human race. Each species in the biosphere has its own diversity.
2. It is the combination of different organisms that enables the biosphere to sustain human race.
3. Biodiversity is vital for a healthy biosphere. Biodiversity is must for the stability and proper functioning of the biosphere.
4. Besides these biodiversity is so important due to having consumptive use values, productive use.
5. Values, social values, ethical values and aesthetic values.

52. சுற்றுச்சூழல் பல்லுயிரியலை விவரிக்க.

Describe Ecosystem Biodiversity.

1. Ecosystem diversity deals with the study of different ecosystems in a certain location and their overall effects on humans and the environment as a whole.
2. It is one of the types of biodiversity along with species diversity, genetic diversity, and functional diversity.
3. Ecosystem diversity focuses on both terrestrial and aquatic ecosystems. Also, it includes the variation of a biological community such as the number of levels of ecosystem diversity and different niches or habitat diversity, and other ecological processes.
4. Ecosystem diversity has a great deal on both genetic and species diversity, thus it is coined as the "largest scale of biodiversity".
5. Grasslands, tundras, deserts, rainforests, terrestrial and marine ecosystems, are some examples.
6. Ecosystems that are diverse and contribute a lot to creating a well-balanced environment.

53. தாவர மூலத்திலிருந்து பொதுவாகப் பயன்படுத்தப்படும் சில நவீன மருந்துகளைப் பட்டியலிடுக.

List out some commonly used modern drugs from plant source.

1. Acetyldigoxin plant - Digitalis lanata (Grecian foxglove, woolly foxglove)
2. Adoniside plant - Adonis vernalis (pheasant's eye, red chamomile)
3. Aescin plant- Aesculus hippocastanum (horse chestnut)
4. Aesculetin plant- Frazinus rhychophylla
5. Agrimophol plant -Agrimonia supatoria
6. Ajmalicine plant-Treatment for circulatory disorders Rauwolfia sepentina

54. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) நிரல்படுத்தக்கூடிய படிக்க மட்டும் நினைவகம் (PROM)

Programmable Read Only Memory (PROM)

1. PROM - Programmable Read-Only Memory. PROM is a written type of ROM.
2. To fulfil the overall requirements of a group of various ROMs that may consist of any selected content of the memory.
3. This memory is written only once by the user and electrically programmed at that time.
4. It is called a storage coder.

(ii) அழிக்கக்கூடிய நிரல்படுத்தக்கூடிய படிக்க மட்டும் நினைவகம் (EPROM)

Erasable Programmable Read Only Memory (EPROM)

1. It is a type of ROM that can be written and read optically. The storage cells in it must stay within a similar initial state.
2. The storage permanency of the EPROM is reduced as compared to PROM
3. EPROM is very much susceptible and receptive to electrical noise and radiation.

(iii) மின்சாரம் அழிக்கக்கூடிய மற்றும் நிரல்படுத்தக்கூடிய படிக்க மட்டும் நினைவகம் (EEPROM)

Electrically Erasable and Programmable Read Only Memory (EEPROM)

1. This type of ROM makes use of electricity for erasing the content in EEPROM.
2. The memory in EEPROM might be non-volatile.
3. It is capable of storing a very little amount of data and information used in computer BIOS/ laptop.

55. நெட்வொர்க் என்றால் என்ன? மேலும் அதன் வகைப்படுத்தலை விளக்குக.

What is Network? and explain its Classification.

1. A computer network is a collection of computers and other peripheral devices
2. Connected in order to exchange data and hardware resources.
3. Sharing of information, sharing of resources, storage efficiency, and timely communication, among other things.
4. **LAN (Local Area Network):** Systems connected in a small network like in a building or a small office
It is inexpensive
5. **PAN (Personal Area Network):** The smallest computer network Devices may be connected through Bluetooth or other infra-red enables devices
6. **MAN (Metropolitan Area Network):** A network that can be connected within a city, for example, cable TV Connection It can be in the form of Ethernet, ATM, Token-ring and FDDI
7. **WAN (Wide Area Network):** A network which covers over a country or a larger range of people
Telephonic lines are also connected through WAN
8. **VPN (Virtual Private Network):** A network which is constructed by using public wires to connect to a private network.systems use encryptions and other security mechanisms to ensure only authorised users can access.

56. ரூர்போக்களின் வகைகளை பட்டியலிடுக.

List out the different types of Robots.

1. Device can only be called a “robot”
2. It contains a movable mechanism, by sensing, planning, actuation and control components.
3. “Robot” usually refers to a machine that can be electronically programmed to carry out a physical tasks or actions.

Types of robots:

1. Industrial Robots
2. Mobile robots
3. Rolling robots
4. Walking robots
5. Stationary Robots
6. Autonomous Robots
7. Remote-control Robots

57. அறிவியல் மற்றும் தொழிலக ஆய்வு மன்றம் (CSIR) பற்றி சிறு குறிப்பெழுதுக.

Write a short note on Council of Scientific & Industrial Research (CSIR).

1. Established in 1942
2. Autonomous body.
3. CSIR is the largest research and development organisation in India
4. 38 laboratories/institutes,
5. Under Ministry of Science and Technology,
6. Research activities -life sciences, aerospace engineering, structural engineering, food, ocean sciences, metallurgy, petroleum, chemicals, mining, leather and environmental science.

58. இந்திய மருத்துவ ஆராய்ச்சி கவுன்சில் (ICMR) குறித்து குறிப்பு தருக.

Give an account on the Indian Council of Medical Research (ICMR).

1. The Government of India funds ICMR.
2. Under the Department of Health Services (DHS), Ministry of Health and Family Welfare (MoH&FW).
3. Headquarters - New Delhi.
4. It is a free and online public record system for the registration of clinical trials being conducted in India.
5. It encourages registration of clinical trials before the enrolment of the first participant.
6. Union Health Minister of India presides over the governing body of ICMR.

59. தேசிய அறிவியல் மற்றும் தொழில்நுட்ப கண்டுபிடிப்பு கொள்கை 2020 பற்றி விளக்குக.

Explain National Science and Technology Innovation Policy 2020.

1. STIP will lead to the establishment of a National STI Observatory that will act as a central repository for all kinds of data related to and generated from the STI ecosystem.
2. The “One nation, One subscription” policy
3. Atleast 30% representation be ensured for women
4. To establish a system whereby all researchers in India can access research published in top international journals for no cost.
5. All data used in and generated from public-funded research will be available to everyone
6. Collaborative Research Centres (CRCs) will be established
7. It bring the industries, MSMEs, startups, R&D institutions and HEIs with the government.
8. It proposes lateral entry of scientists up to 25 per cent of scientists in related ministries.

60. மனிதரில் ஒலி உருவாதல் முறையை விளக்குக.

Explain the mechanism of sound formation in human.

1. In humans, the voice is produced in the voice box called the larynx in the throat. It is located in the upper part of the trachea.
2. Muscle fibers called vocal cords are strung across the larynx.
3. Vocal cords have narrow slits. Through this the air passes in and out.
4. When we speak, air from the lungs passes through the trachea to the larynx.
5. As air passes through the narrow slits the vocal cords vibrate and produce sound.
6. Men's voice is heavier than women's because their vocal cords are longer and thicker.

61. மனித காதுகள் செயல்படும் விதத்தை விவரி.

Explain how human ears work?

1. The ear is an important organ for hearing sound.
2. We can hear sound through our ears.
3. The human ear inhales high-frequency vibrations in the air and analyzes them.
4. Ears of aquatic animals are designed to receive high frequency vibrations of water.
5. The outer part of the human ear is called the earlobe. It is designed to collect sound from the surroundings.
6. These vibrations reach specialized cells in the inner ear.
7. Vibrations from the inner ear are transmitted to the brain in the form of signals. The brain perceives these signals as sounds.

62. ஒளி அலைகள் பரவ உட்கம் தேவையா? நிரூபி.

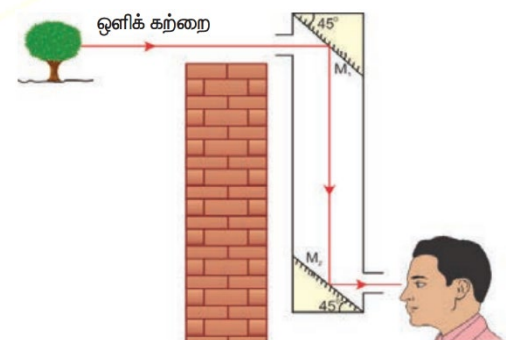
Do light waves need a medium to spread? Justify.

1. Propagation of sound waves requires materials like air, water and steel.
2. Sound waves cannot travel in a vacuum. This can be explained by bell test.
3. Let us take an electric bell and a clock. The electric bell is mounted in an airtight bell chamber.
4. The jar is connected to a vacuum pump.
5. When we ring the bell, we hear the sound. As the air in the jar is slowly expelled by the vacuum pump.
6. The sound level starts to decrease little by little. No sound is heard after completely deflating the air.
7. If air is pumped back into the flask the sound will start again.

63. பெரிஸ்கோப் செயல்படும் விதத்தை பற்றி எழுதுக.

Write about how periscope works.

1. A periscope is an instrument used to view other objects or vessels above or around an object or submarine.
2. This device works on the principles of reflection of light. It has a long exterior.
3. A mirror or triangle is fixed at each end at an angle of 45° in its interior.
4. Light from a distant object hits the mirror at the top of the periscope and is reflected vertically downwards.
5. For glasses to obtain high visibility in certain periscopes of complex structure
6. Optical fibers are used instead.



64. பின்வரும் வினாக்களுக்கு விடையளி.

Answer the following Questions.

(i) மேக கூட்டங்கள் வெண்மை நிறமாக காட்சியளிக்க காரணம் கூறுக.

Give reasons why cloud clusters appear white in color.

Mie-Scattering:

1. Me-scattering occurs when the diameter of the scattering particle is equal to or greater than the wavelength of the incident light.
2. Scatter recovery depends on the type of scatter. And the amount of scattering depends on the wavelength of the light.
3. Me-scattering is caused by dust, smoke, water droplets and some particles in the lower atmosphere.
4. Me-scattering causes clouds to appear white.
5. When white light falls on water droplets in a cloud, the water droplets scatter all the colors equally.
6. Thus all the dispersed colors merge together and become white.

(ii) டிண்டால் விளைவு.

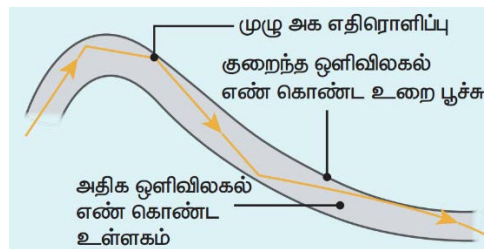
Tyndall effect.

1. When a ray of sunlight enters through the window of a dusty room, the path of the ray is clearly visible to us.
2. The path of the light beam becomes visible due to scattering of the light beam by the dust mixed in the air in the room. This phenomenon is an example of Tyndall scattering.
3. The phenomenon of scattering of light rays by colloids in a colloidal solution is called Tyndall scattering or Tyndall effect.

65. ஒளி இழை என்றால் என்ன? மற்றும் அதன் பயன்பாடுகளை குறிப்பிடுக.

What is optical fiber? and mention it's uses.

1. Based entirely on echo phenomenon, messages can be transmitted through optical fibers.
2. The inner part of the optical fiber is called core and the outer part is called cladding or sleeving. For full reflection the refractive index of the inner material must be greater than the refractive index of the outer cladding.
3. The optical message at a certain horizontal angle inside the surface where the fiber meets the cladding.
4. Even when the fiber is folded, the angle of incidence of light incident on the surface where the inner and outer surfaces meet is always greater than the angle of refraction.
5. An endoscope is a bundle of light fibers. Doctors will inject it into the patient's body and examine the internal organs.
6. Light fibers are passed into the patient's body through the mouth, nose or an open opening in the body. By doing so, surgeries are also being performed now.



66. ஏன் பாதரசம் அல்லது ஆல்கஹால் வெப்பநிலைமானிகளில் பயன்படுத்தப்படுகிறது?

Why mercury or alcohol is used in thermometers?

1. Usually mercury or alcohol are the liquids used in thermometers.
2. Because they remain in the liquid state despite changes in their temperatures.
3. Even a small variation in temperature can cause a change in the volume of particles.

4. We measure temperature by measuring this change in volume of liquids in a thermometer.

Properties of Mercury:

1. It is opaque and glossy.
2. It does not stick to the walls of the glass tube.

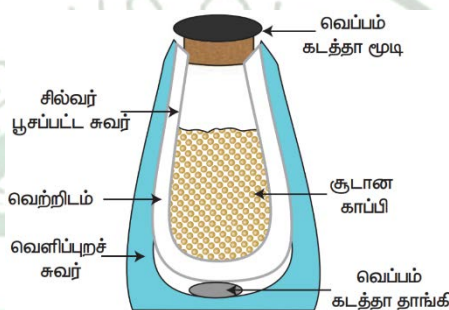
Properties of Alcohol:

1. Its expansion property increases for one degree Celsius rise in temperature.
2. It can be highly colored. Therefore, the tortoise can be clearly seen inside the glass tube.

67. வெப்ப குடுவை மற்றும் செயல்படும் விதத்தை விளக்குக.

Explain the working principle of Thermoflask.

1. A thermos flask (vacuum flask) is a non-conducting heat storage cell in which the thermal constant of the material inside it can be kept for a long time without increasing or decreasing the temperature of the surroundings.
2. It keeps the temperature of the liquid kept constant for a long time and protects it from any change in its taste.



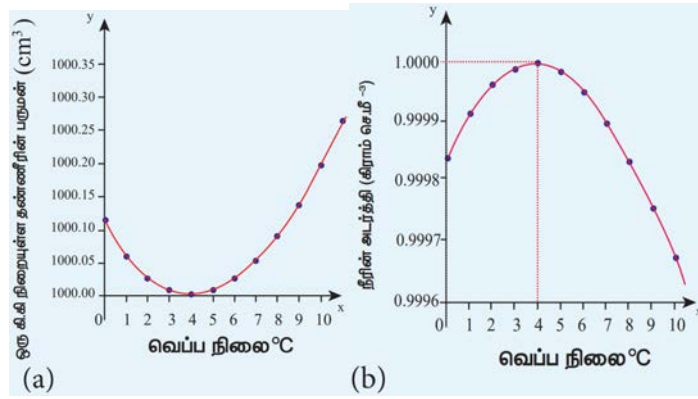
How a thermos flask works:

1. A vacuum flask is a two-walled container. Its interior is made of silver. There is a void between the two walls.
2. The phenomena of convection and conduction help to keep the heat energy from dissipating.
3. Since there is little air between the walls, heat is not transferred from outside to inside and from inside to outside.
4. Heat can be transferred by conduction only where the two walls meet at the top and bottom of the flask. The silver wall in the flask reflects heat radiation back into the liquid in the flask, keeping the liquid warm for a long time.

68. நீரின் முரண்பட்ட விரிவு பற்றி விளக்குக.

Explain the anomalous expansion of water.

1. At normal temperatures liquids expand when heated and contract when cooled. But water has acquired an opposite quality. Water contracts when heated from 0°C to 4°C.
2. As water cools from room temperature to 4°C, its density decreases.
3. Its density increases when it is cooled below 4°C. And its density will decrease. This means that at 4°C water attains maximum density. This elasticity of water is known as the inverse expansion of water.
4. In cold countries, the surface temperature of lakes is lower than its bottom temperature during winter.
5. The density of solid water (ice) is lower than that of normal water, below 4°C frozen water (ice) floats above normal water and reaches the surface of lakes.
6. Although the surface of lakes and ponds is frozen and covered with ice, the water below remains unfrozen and protects aquatic life.



69. மின்காந்தத்தின் பண்புகள் மற்றும் பயன்களை பட்டியலிடுக.

State the characteristics and utility of electromagnets.

Electromagnetism has revolutionized engineering applications tremendously. Apart from this it has made great changes in medicine, industry and astronomy.

a. Loudspeaker:

- Inside the loudspeaker, an electromagnet is placed in front of a stationary magnet. The permanent magnet is kept stationary and the electromagnet is energized. When electric pulses pass through an electromagnetic coil, its magnetic field direction changes rapidly.
- This means that it vibrates as it moves back and forth before being attracted and repelled by the magnetism. The electromagnet is attached to a cone of flexible material such as paper or plastic, which amplifies the vibrations and allows the sound waves to penetrate the air around our ears.

b. Maglev train:

In magnetolevitation an object is lifted by an electromagnetic field. Two types of magnets are used in maglev hoists. One disengages the wheel and lifts the carriage up off the rail. The other pushes the cart forward faster. The carriage moves through guides that control the position and speed of the carriage based on magnetic theory.

c. Medical Department:

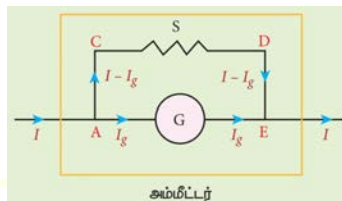
- Currently electromagnetic fields play an important role in advanced medical equipment such as hyperthermia treatments for cancer and magnetic resonance imaging (MRI). Other devices based on electromagnetic technology can easily scan information about the human body.
- Scanners, x-ray equipment and many other medical devices use electromagnetic principles for their operation.

70. கால்வனோமீட்டரை எவ்வாறு அம்பீட்டராக மாற்றுவது?

How to convert a galvanometer into Ammeter?

- 1) An ammeter is an instrument used to measure the current flowing in an electric circuit. Ammeter offers very low resistance to the current flowing in the circuit so it does not block the current flowing in the circuit. So to measure the current flowing in the circuit, the ammeter should be connected in series in the circuit.
- 2) To convert a galvanometer into an ammeter, connect a low resistance side connection to the galvanometer.
- 3) This lower resistance is called the shunt resistance S . The scale of the galvanometer is now indicated in amperes and the shunt of the ammeter is determined by the value of the shunt resistance.
- 4) Current flowing in the circuit I is I_s . When the current reaches junction A , it splits into two components. Let I_g be the current flowing through a galvanometer of resistance R_g through a path AGE . Current $(I - I_g)$ flowing through path $ACDE$ through parallel resistance S is
- 5) Correct the parallel resistance and correct the current flowing through the galvanometer, I_g , to show full scale deflection. The voltage difference across the galvanometer and the voltage difference across the parallel resistor are equal to each other.

- 6) Here the resistance value of the parallel conductor is very low. Hence, the ratio of S / Rg will also be low. This means that the Ra value is also low. This means that the ammeter gives less resistance to the current flowing in the circuit.
- 7) So connecting an ammeter in series in a circuit does not cause any significant change in circuit resistance and current. The resistance of a positive ammeter is the coil.
- 8) But in practice the amount of current shown by the ammeter is slightly less than the amount of current flowing in the circuit. If I is the current measured by the positive ammeter and I is the current flowing in the circuit measured by the ammeter.



71. சிறு குறிப்பு வரைக. Write a short note on.

i. மெக்லிவ் தொடர் வண்டி

Maglev train

A Maglev train has no wheels. It floats above the rails as a strong magnetic force is imparted by computer-controlled electromagnets. It is the fastest train in the world. It is approximately 500 km/h. fast moving.

ii. ஓமின் விதி

Ohm's Law

- 1) Georg Simon Ohm, a German physicist established the relationship between current and voltage difference. This is called Ohm's law.
- 2) According to this law, at constant temperature, the uniform current flowing through a conductor is inversely proportional to the voltage difference across the conductor.

$$V=IR$$

Series connection of resistors

When resistors are in series, the same amount of current flows through each resistor.

$$RS = R1 + R2 + R3$$

Resistors side connection

When several resistors are connected in side connection the sum of the inverses of the resistances of the individual resistors is equal to the sum of the inverses of the resistances. When 'n' resistors of equal value are connected in side connection then the total resistance is R / n.

$$\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

iii. பாரடேயின் மின்னாற்பகுப்பு விதிகள்.

Faraday's Law

1) Faraday's law of electromagnetic induction:

Faraday's Law of Electromagnetic Induction, also known as Faraday's Law, is a fundamental law of electromagnetism that predicts how a magnetic field interacts with an electric circuit to produce an emf (EMF). This phenomenon is called electromagnetic induction.

2) Faraday's first law of electromagnetic induction:

Whenever a conductor is placed in a varying magnetic field, an electric field is induced. When the conductor is closed circuit, a current is induced which is called induced current.

3) Faraday's second law of electromagnetic induction:

The induced EMF in a coil is equal to the rate of change of the flux linkage.

72. சிறு குறிப்பு வரைக. Write a short note on.

i. மின்னல்

Lightning

- 1) Lightning occurs when lightning occurs between clouds or between clouds and the earth. During a thunderstorm, air moves rapidly upward. This wind drags the smaller snowflakes upwards.
- 2) At the same time small water droplets move from top to bottom. When they collide with each other the ice particles become positively charged and move upwards. Water droplets are oppositely charged and move downwards.
- 3) Thus the upper part of the clouds is filled with positively charged particles and the lower part is filled with negatively charged particles. When these two meet, the electrons in the water droplets are attracted to the anion particles in the ice. This creates electricity and lightning appears.

ii. இடி

Thunder

- 1) Lightning discharges enormous amounts of electricity and generates heat in excess of 30,000°C. This high level of heat causes the air to expand rapidly and contract again rapidly. As the air rapidly contracts and expands, a shock wave is created there and emits a loud noise. This sound is called thunder.
- 2) Because the distance between the earth's surface and the clouds is great and the speed of light is much faster than the speed of sound, sometimes lightning is seen before we hear thunder.

iii. புவித்தொடுப்பு

Earthing

- 1) Earthing is a safety measure to protect us from electric shock when the fuses in electrical appliances fail. Earthing is defined as the process of transferring the electrical energy from the discharge to earth through a wire of low resistance.
- 2) We get electricity from various sources. A battery is a medium that provides electrical energy. We use battery in wall clocks, mobile phones etc.
- 3) We use electricity supplied in homes to run refrigerator, air conditioner, washing machine, television set, laptop, water boiler etc. Household appliances such as boilers and washing machines generally have three types of wires: live wire, neutral wire and earth wire.
- 4) The earth wire is connected to the metal surface of the electrical equipment. It is connected in this way to prevent accidental shocks.
- 5) For example, in a washing machine the power cord is properly protected by a fuse. There is a chance that the live wire will touch a metal surface if the fuse is blown, perhaps by a short circuit.
- 6) When the earthing wire is properly connected to the metal surface, the excess current is discharged to the earth and we are protected from electric shock. Since the earth is a good conductor, the leakage current from the faulty insulation will flow through it.
- 7) Lightning conductor
- 8) A lightning conductor is a device that helps protect tall buildings from lightning damage. This lightning conductor consists of a metal rod attached to the top of the building in contact with the air. When buildings are constructed, this metal rod and the copper wire from it are attached to the walls of the building.

73. சிறு குறிப்பு வரைக. Write a short note on.

i. மின்னழுத்தம்

Voltage

- 1) By voltage definition, it is the difference in electric potential between two points. It is the work done in moving charge from one pole to another through a wire.
- 2) To determine the voltage between two points, both the static electric field and the changing electromagnetic field are considered.

$$V=IR$$

ii. மின்னோட்டம்

Current

Electric current is the rate of flow of electrons in a conductor. The SI unit of electricity is the ampere.

$$I = Q / t$$

iii. மின்தடை

Resistance

The impedance/resistance of a circuit is the ratio of the voltage applied to the current flowing through it.

$$R=V/I$$

74. வித்தியம்-அயன் மின்கலத்தின் சாதகங்கள் மற்றும் பாதகங்கள் வரிசைப்படுத்துக.

List out the Advantages and disadvantages of lithium-ion Batteries.

Benefits:

- 1) High energy density
- 2) Low maintenance
- 3) Variety of applications
- 4) Longevity
- 5) No need to chill

Evils:

- 1) Lithium-ion batteries require a protection circuit to maintain voltage
- 2) Lithium-ion batteries are more expensive to manufacture than nickel-cadmium
- 3) Lithium-ion batteries face problems as their usage time increases.
- 4) Lithium-ion batteries are considered an immature technology.
- 5) Explosive
- 6) Sometimes it gets hot

75. ரேடார் வரையறு மற்றும் அதன் நடைமுறை பயன்பாடுகளை வரிசைப்படுத்துக.

Define Radar and list out its Practical Applications.

- 1) The full form of radar is radio detection and ranging. It is an electronic device that emits an ultra-high frequency of the microwave segment or radio spectrum that helps identify obstacles to spot or range an object. It can also be used to explore or identify the speed and regularity of the activity object.
- 2) It was secretly planned and produced by several countries during World War II. In 1940 the US Navy defined the term RADAR.

Applications of Radar:

- 1) Army
- 2) Law enforcement
- 3) Space
- 4) Remote Sensing of Environment
- 5) Flight Navigation
- 6) Navigation of ship
- 7) Aviation

76. தொகுப்பு சிவ்னுகளை விவரி.

Explain Integrated Chips.

- 1) An integrated circuit is also referred to as IC or chip or microchip. A few thousand to millions of transistors, resistors and capacitors are assembled on a small piece of semiconductor like silicon.
- 2) Integrated Circuits (ICs) are the milestone of modern electronics. Advances in technology and the advent of the VLSI (Very Large Scale Integration) era have made it possible to fit very large numbers of transistors on a single chip.
- 3) Over conventional circuits, integrated circuits have two major advantages: cost and performance. Technological advances have greatly improved the size, speed, and capacity of chips.
- 4) Nowadays computers, mobile phones and other home digital devices are made possible by smaller and cheaper integrated circuits. Integrated circuits can function as amplifiers, oscillators, timers, microprocessors, and computer memory.
- 5) These miniature integrated circuits perform calculations and store data using digital or serial technology. Digital ICs use logic gates that are driven by values of one and one. A DOWN signal given to a digital synthesizer produces a 0 value and a RISING signal produces a 1 value.
- 6) Digital synthesis circuits are also used in computers, networking equipment and most consumer electronic devices.
- 7) Analog ICs or linear ICs operate with continuous values. This means that the component of a sequential synthesis loop can take any value and output another value. Bidirectional synthesis circuits are particularly useful in audio and radio frequency amplification.

77. செயற்கைக்கோள் தகவல்தொடர்பை விவரி

Explain Satellite Communication.

- 1) Satellite communication is a type of communication that transmits signal between transmitter and receiver through satellite.
- 2) The information signal is transmitted from the earth station to the satellite in the sky through an uplink (frequency band 6 GHz). It is then amplified by a transponder there and retransmitted to another earth station through the downlink (frequency band 4 GHz).
- 3) When high frequency radio wave signals travel in a straight line (line of sight), they may encounter tall buildings or mountains or the curvature of the Earth.
- 4) But this type of communication uses satellites to amplify radio signals through transponders and rebroadcast them through uplinks and downlinks to reach remote locations. Hence it is also called radio repeater in the sky. It has applications in all fields. Some of them are discussed below.

Applications:

Satellites are divided into various categories based on their applications. Some of the satellites are described below.

- 1) **Meteorological Satellites:** These are used to monitor Earth's weather and climate. These satellites help us predict rainfall, dangerous cyclones and storms by measuring the mass of clouds.
- 2) **Communication Satellites:** These are used to transmit television, radio, internet signals. For long distance transmission, more than one satellite is used.
- 3) **Guidance Satellites:** These are involved in determining the geographical position of ships, aircraft or any other object.

(12 MARKS)

1. ஆதித்யா L1 மிஷன் பற்றி விளக்குக.

Explain about Aditya L1 Mission.

- ✓ The Indian Space Research Organization (ISRO) is gearing up for its first scientific mission to study the Sun, Aditya-L1. It is placed at a point in space known as the L1 Lagrange point.

- ✓ Aditya L1 is ISRO's 2nd space-based astronomy mission after Astrosat launched in 2015.
- ✓ Aditya 1 was renamed as Aditya-L1. Aditya 1 was meant to observe only the solar corona.

Key Points:

- ✓ **Launch Vehicle:** Aditya L1 will be launched using Polar Satellite Launch Vehicle (PSLV) XL with 7 payloads (instruments).
- ✓ **Objective:** Aditya L1 Sun's corona (visible and near-infrared rays), Sun's photosphere (soft and hard X-rays),
- ✓ Studies the chromosphere (ultraviolet), solar emissions, solar wind and flares, and coronal mass ejections (CMEs). , and clock imaging the Sun.
- ✓ **Challenges:** The distance of the Sun from the Earth (about 15 crore km on average, compared to 3.84 lakh km for the Moon). This great distance presents a scientific challenge.

Importance:

- ✓ The evolution of every planet, including Earth and exoplanets beyond the solar system, is governed by its parent star.
 - ✓ Effects of variations in solar weather system: Variations in these weather patterns can change the orbits of satellites or shorten their lifetimes, interfering with onboard electronics.
 - ✓ Knowledge of solar phenomena is key to understanding space weather.
 - ✓ Continuous solar observations are needed to detect, monitor and predict the impact of storms towards Earth.
 - ✓ Many tools and their components for this work are manufactured for the first time in the country.
2. ISS மற்றும் அவற்றின் முக்கியத்துவத்தைப் பற்றி விவாதிக்கவும்.

Discuss ISS and its importance.**International Space Station:**

- ✓ The International Space Station (ISS) is a large space station that houses astronauts.
- ✓ It operates in a low Earth orbit at a distance of about 400 km. It also serves as a science laboratory.
- ✓ Its first part was placed into orbit in 1998.
- ✓ Construction of its major parts was completed in 2011.
- ✓ It is the largest human-made object in the sky that can be seen with the naked eye.
- ✓ Humans first visited this center in the year 2000.
- ✓ According to the current plan, the International Space Station will be operational till 2024.
- ✓ It is also said that it can be operated till 2028 if required.
- ✓ Operating and maintaining the International Space Center requires the cooperation of five space agencies from 16 different countries.
- ✓ Those organizations are: NASA (USA), Roskosmos (Russia), ESA (Europe), JAXA (Japan), and CSA (Canada). Belgium, Brazil, Denmark, France, Germany, Italy, Holland, Norway, Spain, Sweden, Switzerland and England are also part of this federation.

Advantages of International Space Station:

- ✓ According to the American space agency NASA, the International Space Station has benefited us (or may benefit in the future) in the following ways.

Water Purification Methods:

- ✓ Technology used in the International Space Station can provide improved water filtration and purification systems in water-scarce areas.

Eye tracking technology:

- ✓ An eye tracking device developed to perform investigations in microgravity has been used in many laser surgeries.

Robotic arms and surgeries:

- ✓ To remove tumors that cannot be removed by surgery (eg, brain tumors) and to perform a more precise biopsy (biopsy).

3. பிரபஞ்சத்தின் பரிணாம வளர்ச்சியின் பல்வேறு கருதுகோள்களை விளக்குக.

Explain the various hypothesis of universe evolution.

- ✓ The most important theory about the origin of the universe is called the Big Bang Theory.
- ✓ It is also known as Expanding Universe Hypothesis.
- ✓ In 1927, Belgian astronomer Abbe George Lemaitre first proposed the theory of the origin of Barand. Edwin Hubble expanded the horizon
- ✓ This is also known as The Big Bang Theory.
- ✓ According to this theory, Earth formed and expanded 13.75 billion years ago.
- ✓ Solids were thrown out in all directions with great force from the barend.
- ✓ Galaxy means Milky Way. The Milky Way is a universe in which our solar system resides.
- ✓ Universes have three major forms.

Spiral Galaxies:

- ✓ It consists of a flat and rotating circle of stars, gas, and dust.

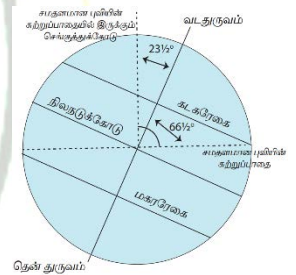
Elliptical Galaxies:

- ✓ It consists of older stars with less gas. Messier 89 is an elliptical galaxy.
- ✓ Irregular Galaxies.
- ✓ It is a young universe rich in dust and gas. It is very bright. Example, Large Magellanic Cloud

4. புவியின் உருவமும் வடிவமும் பற்றி விவாதிக்க.

Discuss about the shape and form of the earth.

- ✓ Once upon a time it was believed that the earth was flat and that ships could sail along the edges of the earth while sailing at sea.
- ✓ According to Anaximander (600 BC), the cylindrical earth is surrounded by a celestial sphere.
- ✓ Pythagoras (582-507 BC) believed that the earth was spherical. This form was considered the accepted form by the scholars.
- ✓ Aristotle (384 - 322 BC) proposed the theory that the Earth is spherical.
- ✓ Some of his claims are that the moon's shadow appears round during a lunar eclipse and that the constellations appear higher in the sky as we travel towards the South Pole.
- ✓ Eratosthenes (275 - 195 (BCE)) discovered the dimension of the Earth by observing the Sun's ascension relative to the position of the Earth's surface as seen from Egypt.
- ✓ Hilltops glow with sunlight even after sunset.
- ✓ Ships disappear after touching the horizon.
- ✓ Moon appears like a disc.
- ✓ The Earth is a sphere, convex at the equator and flattened at the poles.
- ✓ This is called "Geoid".
- ✓ It means Earth-like structure. Due to centripetal force, the equatorial region bulges.
- ✓ Earth's gravitational force is strongest at the poles and weakest at the equator.
- ✓ Sun's gravitational force differs at the poles.
- ✓ As the Earth revolves around the Sun, the North Pole is towards the North Star.
- ✓ If the Earth is not tilted on its axis, day and night will be of the same duration in all climates.



5. நவீன ஆவர்த்தன அட்டவணையின் அம்சங்களை விளக்குக.

Elucidate the features of Modern periodic table.

The features of modern periodic table.

1. In 1913, the English physicist Henry Mosley proved through his X-ray diffraction experiment that the properties of elements depend on their atomic number and not their mass. As a result, the modern periodic table is arranged in ascending order of atomic number.
2. This modern periodic table is an extension of Mendeleev's table. Mendeleev table is known as short table and modern table is known as long table.

Modern rule of thumb:

1. All elements are arranged in order of their increasing atomic number.
2. The horizontal arrangement of elements in the periodic table is called 'series'. There are seven series in total.
3. Elements are arranged in rows according to the number of shells in their atoms.
4. The vertical column from top to bottom in the periodic table is called the 'groups'. There are 18 blocks in the periodic table.
5. These are divided into several families according to the properties of the elements in each block.

Features of Modern Periodic Table:

1. This table is based on the atomic number, the most fundamental characteristic of an atom.
 2. It clearly combines the position and atomic structure of the element.
 3. Each serial ending is argumentative. As the number of atoms in a series increases, the energy shells slowly fill until the inert gas is reached.
 4. It is easy to remember and reproduce.
 5. Each block is self-contained. Hence it was decided not to have sub-blocks.
 6. Since the isotopes of an element have the same atomic number, they are assumed to have the same atomic number.
 7. The location of the eighth block (Mendeleev table) is also proved correct. Intermediate elements are brought into the middle because their properties lie between the properties of the elements to their right and left.
 8. This table separates metals and non-metals. Metals are located in the upper right corner of the chart.
 9. All the elements that were displaced in the Mendeleev table have been corrected and are now in their correct place. Because these are based on atomic number.
 10. Give proper reason for placing lanthanides and actinides at the bottom of the table.
6. அரிமானத்தை தடுப்பதற்கான பல்வேறு வழிமுறைகளை விளக்குக.

Explain different methods to control Erosion.

1. Planting of plants.
 2. Equal height combination ploughing.
 3. Spreading baked clay on top.
 4. Prevention of overgrazing.
 5. Increasing afforestation.
 6. Fencing with alluvial soil.
 7. Regulation of water drainage.
 8. Improve soil stability.
 9. Layer farming.
 10. Minimize excessive water use.
7. சோப் மற்றும் டிட்டென்சன்ட் பற்றி எழுதுக. மற்றும் அதன் நன்மை தீமைகளை வரிசைப்படுத்துக.

Write about Soaps and Detergents and list out its advantages and disadvantages.

1. Soap and detergents are used to remove dirt and clean.
2. Clean water alone cannot remove dirt and oil from clothes and bodies.
3. Surfactants present in soaps and detergents reduce surface tension by binding water molecules around them.
4. Soap and detergents have different chemical nature.
5. A soap is a salt of one or more fatty acids. A substance used to remove dirt. Detergents are a chemical compound or group of chemical compounds used to remove dirt.

Soap:**Hard soap**

Hard soap is obtained when an oil or fat is subjected to saponification reaction with caustic soda (sodium hydroxide). These types of soaps are generally used for laundry.

Mild soap

Mild soap is obtained when oil or fat is subjected to saponification reaction using potassium salt. This type of soap can be used to cleanse the body.

Detergent verb

Take the soapy oil in an iron flask and add slightly more than 10% alkaline solution. This mixture should be steamed and boiled. After a few hours the oil is hydrolyzed. This method is called soaping reaction.

Salting

Common salt is added to the boiling mixture. Now the soap precipitates at the bottom of the tank. After several hours, the soap floats on the surface of the liquid as a solid, which is extracted and cooled to obtain the desired soap.

Detergents:

The manufacturing of detergents brought about various changes in the laundry industry. They can also be used in hard water and acidic water.

Method of making detergents

Detergents are made by adding sulfuric acid to a hydrocarbon derived from petroleum. The molecules produced by these reactions correspond to the fatty acid molecules in soap.

Uses of Detergents:

1. Detergent can be used in both hard water and soft water. Detergents work better than soap in hard water.
 2. Detergent can be used even in salt water and acidic water.
 3. Detergent does not cause any stains or scratches on washing machine or clothes.
 4. Clothes like wool which cannot be washed with soap can be washed with detergent
 5. Used as an emulsifier in the manufacture of automotive grease.
 6. Some detergents have hydrocarbon chains. Microorganisms in water cannot decompose them. This will pollute the water.
 7. Detergents are expensive compared to soaps.
8. மாற்று எரிபொருள் பற்றி நீவிர் அறிந்தது என்ன ? அதன் வகைகள் மற்றும் நடைமுறை பயன்பாடுகளை எழுதுக.

What do you mean by Alternative Fuel? Write about its different types and Practical Application.

Definition:

1. Energy is considered as an important aspect that can be required by various industries.
2. Such energy is supplied from conventional sources such as coal, petroleum, natural gas etc.
3. As the demand of energy is increasing day by day and thus energy is used in a regular manner.
4. It causes various environmental and climate problems.
5. In view of these the demand for alternative fuels is increasing and the attraction of petroleum products is also decreasing.
6. A variety of alternative fuels are in use worldwide. They are
7. Compressed Natural Gas,
8. Biodiesel
9. Hydrogen cells

Advantages:

1. Solar batteries are alternative fuel properties which are not readily available.
2. Achieving these requires technological development and technical facilitation.
3. ADVANTAGES OF THESE Alternative fuels are renewable.
4. Fuel imports can be reduced by easily supplying these fuels domestically.
5. They are environment friendly.
6. Environmentally friendly.
7. Use of fuel from castor crops improves farmers' livelihood.

Disadvantages:

1. Use requires technical development.
2. We can use such end products only if there is more investment.
3. Substitution of crops like castor for fuel will lead to shortage of food crops.
4. These are very difficult to store.
5. Alternative fuels such as solar wind are already in use.

9. தாவர செல் மற்றும் விலங்கு செல் வேறுபடுத்தி காட்டுக.

Differentiate Plant cell and Animal cell.

1. All living things are made up of cells.
2. New cells arise from existing cells.
3. The cell contains genetic information. These are passed down from parents to offspring.
4. All metabolic reactions take place inside the cell.

Microstructure of Eukaryotic Cell:

1. Eukaryotic cells have a well-defined structure. They are found in organisms with many variations. Examples are plant and animal cells.
2. **Animal Cell:** Animal cell is surrounded by cell membrane or plasma membrane.
3. Within this membrane is a gelatinous matrix called protoplasm.
4. There are other organelles like mitochondria, Golgi body, centrioles, lysosomes, ribosomes and cell frame.
5. Plant cells have a regular, clear cell wall.
6. Have a large central poll and computers.
7. Also many cell membranes are found as in animal cells.

10. ஸ்டெம் செல் தொழில்நுட்பம் சார்ந்த சவால்கள் மற்றும் சாதகங்கள் குறித்து விவாதிக்க.

Discuss the advantages and challenges of Stem cell technology.

1. Stem cells are cells derived from our bone marrow or umbilical cord.
2. They are called the basic cells of our body.
3. This stem cell has the ability to repair or mature any cell in the body.
4. Hence stem cell therapy is seen as a promising future.
5. New cells can be grown and repaired in the laboratory to repair damaged cells and tissues.
6. Parts of organs that are not working properly can be repaired.
7. Can repair genetic defects in cells.

Pros:

1. To know how diseases occur or why some cells develop into cancer cells.
2. To cure cancerous tumors in the brain.
3. It targets cancer tumors with the herpes virus in the stem cell.
4. The blood vessels in some of the valves in the heart become dysfunctional.
5. A 'mini heart' (small heart) can be implanted in the affected areas to restore blood flow to the blood valves.
6. Male infertility can be treated using stem cells.

Challenges:

1. Fees for stem cell savings banks can run into lakhs when going to private individuals.
2. Indian Institute of Medical Research and Government of Tamil Nadu have jointly launched a new stem cell research center with international standards in selected government hospitals.

11. கொரோனா -19 வைரஸ் குறித்து எழுதிக் மேலும் கொரோனா பெருந்தொற்றை கட்டுப்படுத்துவது ஏன் கடினமாக உள்ளது?

Write about Covid – 19 virus and why is it difficult to contain corona pandemic?

1. Corona virus belongs to the type SARS COV 2.

2. The virus was first detected in Wuhan, China.
3. It was later labeled as Covid-19 by the World Health Organization (WHO).
4. The outbreak of the virus has been declared a public health emergency.
5. It is viruses that can attack respiratory problems.
6. These symptoms include persistent fever, fatigue, high temperature, loss of smell or taste, headache, hoarseness, throat irritation, etc.
7. Corona is difficult to control.

Reasons:

1. It spreads easily from person to person due to high population density.
 2. Migration of people.
 3. Due to the large number of displaced workers, information about them is not properly maintained by the government.
 4. And it is more likely to affect the elderly.
 5. Without adequate awareness.
 6. Non-cooperation with Government activities.
 7. Absence of test method.
 8. No health infrastructure.
 9. Population density.
 10. Absence of ventilator facility.
 11. Impact on daily life.
12. குழந்தைகள் எதிர்கொள்ளும் ஊடச்சத்து குறைபாட்டை களைவதற்காக தமிழக அரசு எடுக்கும் நலத்திட்ட நடவடிக்கைகளை வரிசைப்படுத்துக.

List out the welfare measures carried out by Tamil Nadu government to address the problem of malnutrition among children.

1. Malnutrition, According to National Family Health Report. Malnutrition among children under the age of six is higher in India than in any other country.
2. Two out of three children in India are diagnosed with malnutrition.
3. Mainly the problems like short height and overweight are called malnutrition.
4. In terms of states states like Bihar, Assam have high rates of malnutrition.
5. States like Tamil Nadu and Kerala have low levels of malnutrition.
6. Malnutrition in children under the age of six can cause long-term health problems.

Causes of Malnutrition:

1. Poverty, Uneven Diet, Lack of awareness.
2. **Action taken to eradicate malnutrition.**
3. Midday Meal Scheme This scheme was started in Madras Province in 1923 during the Justice Party rule.
4. The scheme was expanded in 1952.
5. Subsequently, in 1982, the scheme was renamed as Nutrious Noon – Meal Programme.
6. Accordingly mid day meal scheme is implemented for students studying in government schools.
7. Its main purpose.
8. Addressing malnutrition among students.
9. Increasing school attendance.
10. Imparting basic education.
11. Lowering the child sex ratio.
12. Food rich in protein is provided under this scheme.

Chief Minister's Breakfast Program:

1. Under this scheme Government schools will provide morning breakfast along with midday meal to the students of classes I to V.
2. It is implemented from 2022 onwards.

Integrated Child Development Services:

1. The scheme was started in 1975.
2. Under this Anganwadi Centers are functioning to improve the health and nutrition of pregnant women, lactating mothers and children.

National Food Security Act 2014:

Under this, getting food is made a legal right.

Poshan Abhiyan Scheme:

1. It is a scheme proposed by the Central Government and implemented by the States.
2. The scheme is implemented to alleviate malnutrition among children.

National Nutrition Mission:

1. Conducting special medical camps in schools to address child malnutrition.
2. Providing nutritional tablets.
3. The State is a pioneer in addressing child malnutrition through such programs.

13. மகாரந்தச் சேர்க்கை செயல்முறை மற்றும் அதன் வகைகளை விவரிக்க, அதன் நன்மைகள் மற்றும் தீமைகளை பட்டியலிடுக.

Describe the process of Pollination and its types, List out its Advantages and Disadvantages.

அறிமுகம்:

1. Pollination is a process by which pollen grains are picked up from an anther and transferred to the male part of a flower and the female part of the flower called the stigma.
2. For successful pollination, pollen grains must be transferred from flowers of the same species.

Pollination Process:

1. The process of pollination is when the pollen grains from the respective flowers land on the stigma and form the pollen tube which connects both the stigma and the ovary.
2. After the completion of the pollen tube, the pollen grain begins to transport sperm from the grain to the ovule.
3. Then the fertilization process takes place in plants when the sperms reach the ovary and egg cells.
4. The seed is then released from the mother plant, which grows into a plant and continues the cycle of reproduction using pollination.

Types of Pollination:

All flowering plants are completely dependent on pollination for reproduction. There are 2 types of pollination.

1. Self pollination
2. Cross pollination

Self Pollination:

1. It is referred to as primary pollination as it involves one flower. Self-pollination occurs when pollen grains fall directly from the anther to the stigma of the flower.
2. This process is very simple and fast, which leads to a decrease in genetic diversity as the sperm and egg cells of the flower share some genetic information.

Benefits:

1. Self-pollination ensures elimination of recessive characters.
2. Loss of pollen grain is very less as compared to cross pollination.

Evils:

1. The vigor and vitality of the species decreases.
2. This results in decreased immunity to diseases in the offspring

Cross Pollination:

1. It refers to a complex type of pollination that allows the transfer of pollen grains from the anther of a flower to the stigma of another flower.
2. This system leads to an increase in genetic diversity, as different flowers share and combine their genetic information to produce unique offspring.

Benefits:

1. Seeds produced are good in vigor and vitality.
2. All unisexual plants can reproduce by cross pollination.
3. Genetic recombination results in elimination of recessive characters in inheritance.

Evils:

1. In this process, there is huge wastage of pollen grains.
2. Due to genetic recombination during meiosis, good traits and undesirable traits are likely to be added to the offspring.

14. மலட்டுத்தன்மை மற்றும் அதன் காரணங்கள் பற்றி எழுதுக. செயற்கை இனப்பெருக்க தொழில்நுட்பம் (ART) பற்றி விவரிக்க.

Write about Human Infertility and its causes. Give an account on Assisted Reproductive Technology (ART).

Human infertility:

1. Infertility is a disease of the male or female reproductive system defined by failure to achieve pregnancy after 12 months or more of regular unprotected intercourse.
2. Infertility can be primary or secondary. Primary infertility is when a person has never been pregnant, and secondary infertility is when a person has had at least one previous pregnancy.

Causes of Infertility:

1. Tubal disorders such as blocked fallopian tubes, which are caused by untreated sexually transmitted infections (STIs) or complications from unsafe abortion, postpartum sepsis, or abdominal/pelvic surgery.
2. Uterine disorders may be inflammatory in nature (such as endometriosis), congenital in nature (such as septate uterus) or benign in nature.
3. Ovarian disorders such as polycystic ovarian syndrome and other follicular disorders.
4. Disorders of the endocrine system causing imbalances of reproductive hormones. The endocrine system includes the hypothalamus and pituitary glands.
5. Obstruction of reproductive tract causing dysfunction in ejaculation. This blockage can occur in the tubes that carry sperm.
6. Hormonal disorders leading to abnormalities in hormones produced by the pituitary gland, hypothalamus and testicles

Assisted Reproductive Technology:

Assisted reproductive technology includes all fertility treatments in which eggs or embryos are manipulated. Generally, ART procedures involve surgically removing eggs from a woman's ovaries, combining them with sperm in a laboratory, and returning them to the woman's body or donating them to another woman.

1. Assisted reproductive technology (ART) is used to treat infertility. These include fertility treatments that deal with both eggs and sperm.
2. It works by removing eggs from the uterus. Eggs then mix with sperm to form an embryo.
3. The embryos are then placed back into the parent's body. In vitro fertilization (IVF) is the most common and effective form of ART.

15. கணையத்தின் பல்வேறு செயல்பாடுகள் மற்றும் நீரிழிவு நோய் பற்றி குறிப்பெழுதுக.

Explain different functions of Pancreas and write about Diabetes Mellitus.

1. Pancreas is an elongated yellow gland between the stomach and duodenum.
2. It works in both endocrine and endocrine ways.
3. The ductal part of the pancreas secretes pancreatic juice. It plays an important role in digestion. The area of endocrine secretion is called Langerhan patches.
4. Langerhan patches contain two types of cells namely alpha cells and beta cells.
5. Alpha cells secrete the hormone glucagon and beta cells secrete the hormone insulin.

Functions of Pancreatic Hormones:

1. Insulin:

1. Converts glucose into glycogen and stores it in the liver and muscles.
2. Promotes glucose uptake into cells.
3. Lowers blood glucose levels.

2. Glucagon:

1. Helps convert glycogen into glucose in the liver.
2. Increases blood glucose levels.

3. Diabetes Mellitus

1. Increased blood sugar level (hyperglycemia).
2. Excretion of excess glucose in the urine (glycosuria).
3. Frequent urination (polyuria).
4. Frequent thirst (polydipsia).
5. Frequent hunger (polyphagia).

16. முதலமைச்சரின் உணவும் தரும் காய்கறித் தோட்டத் திட்டத்தை பற்றி குறிப்பு தருக.

Give an account on Chief Minister's Nutritive Vegetable Garden Scheme.

1. August 14, 2021.
2. Under this scheme the State Government aims to promote vegetable production.
3. The scheme aims to encourage women to grow vegetables in their households,
4. It provides fresh vegetables.
5. Home grown vegetables can also help children to get chemical free, nutritious and fresh vegetables.
6. 2 lakh seed packets with the contribution of the State Government and the Central Government.
7. Distribution of 12 vegetable seeds in rural areas at subsidized rates.
8. Government will provide about 1 lakh terrace garden tools and 6 vegetable seeds at subsidized cost in urban areas.
9. 50 major vegetable seedlings and 400 tonnes of seeds will be required to implement the scheme.
10. These seedlings and seeds will be produced in the State Horticulture Farms.
11. It increases soil fertility and increases vegetable cultivation.
12. It will promote Panthal structures in the state for cultivation of vegetable especially cucurbita
13. The scheme will increase vegetable production in the state at the household level as well.

17. இந்திய கணினி அவசரகால மீட்பு நிறுவனம் - CERT-In என்றால் என்ன? அதன் செயல்பாடுகளை பட்டியலிடுக.

What is Indian Computer Emergency Response Team - CERT-In? List out its functions.

1. CERT-In computer emergency response team is a government mandated information technology (IT) security organization.
2. The purpose of CERT-In is to respond to computer security incidents,
3. Reporting of vulnerabilities and promoting effective IT security practices across the country.
4. CERT-In was created in 2004 by the IT Department of India
5. Operates under that department.

6. As per the provisions of Information Technology Amendment Act 2008, CERT-In is responsible for overseeing the administration of the Act.
7. In the latest Information Technology Amendment Act 2008, CERT-In has been designated as the National Agency for performing the following functions in the field of cyber security:
 8. Collection of information on cyber incidents,
 9. Analysis and Dissemination.
 10. Prediction and Warnings of Cyber Security Incidents
 11. Emergency measures to handle cyber security incidents
 12. Coordination of Cyber Incident Response Activities.
 13. Information Security Procedures,
 14. Guidelines on Prevention, Response and Reporting of Cyber Incidents,
 15. Publish impact notes and white papers.
 16. Other functions related to cyber security may be prescribed.
17. Computer Emergency Response Team of India (CERT-In) has signed cooperation agreements with its counterparts in Malaysia, Singapore and Japan for cyber security.
18. The Memorandum of Understanding (MoUs) will promote closer cooperation between India and the three countries to exchange knowledge and experience in detection, resolution and prevention of security related incidents.

18. நுண்ணுயிரிகள் என்றால் என்ன? அதன் பயன்களை விளக்குக.

What are Microorganisms? Explain its Uses.

1. Microorganisms include bacteria, protozoa, algae, and fungi.
2. They are also known as microbes.
3. A microbe is a tiny organism that might be a single cell or a colony of cells.
4. Because of their minute size, they cannot be seen with naked eyes.
5. They can be found in water, air, soil, and inside our bodies and those of other animals and plants.
6. They can be found deep within geysers (thermal vents) where temperatures can reach 100°C and deep in the soil, under several meters of snow, and in highly acidic settings.
7. Protozoa, bacteria, fungi, minuscule animal and plant viruses, viroids, and proteinaceous infectious agents are all examples of microbes.

Uses of Microorganisms:

Medicine:

1. Antibiotics

1. Antibiotic is a substance produced by living organisms which is toxic for other organisms.
2. Sir Alexander Fleming was the first person to discover the antibiotic penicillin in the year 1928.
3. The antibiotic penicillin was obtained from the fungi *Penicillium chrysogenum*.
4. It is used to treat diseases such as tetanus and diphtheria.

2. Vaccines

1. Vaccines are prepared from dead or weakened microbes.
2. Edward Jenner was the first person to discover small pox vaccine.
3. When the vaccine is injected to the body of a patient, the body produces antibodies to fight against the germs.
4. Eg: MMR vaccine is given for preventing Measles, Mumps and Rubella. BCG (Bacille Calmette Guerin) vaccine is given for preventing Tuberculosis.

Agriculture:

1. Natural fertilizer

Microorganisms are called as decomposers because they act upon degradable wastes.

2. Nitrogen fixation

Rhizobium bacteria living in the root nodules of leguminous plants enrich the soil by fixing the atmospheric nitrogen as nitrates which are essential for the growth of plants.

3. Bio-control agents

1. Bacillus thuringiensis (Bt cotton) helps to control insects.
2. Trichoderma (Fungi) helps to protect roots and controls plant pathogens.
3. Baculoviruses (Virus) attack insects and other arthropods.

Industry:

1. Sewage treatment

Aerobic microbes are allowed to grow in the primary effluent during the secondary stage of waste water treatment.

2. Production of biogas

3. Production of alcohol and wine

Alcoholic drinks are prepared by fermentation process using yeast.

4. Microbes in retting and tanning

In daily life:

1. Making bread

2. Preparation of curd and cottage cheese

Lactose in the milk gets turned into Lactic acid by the action of Lactobacillus (bacteria).

3. In Human Intestine

19. வினங்கு படியெடுப்பு செயல்முறையை விளக்குக மற்றும் அதன் நன்மைகள் மற்றும் தீமைகளை பட்டியலிடுக.

Explain the Process of Animal Cloning and list out its Advantages and Disadvantages.

1. Cloning is the process of producing genetically identical individuals of an organism either naturally or artificially.
2. In nature many organisms produce clones through asexual reproduction.
3. Cloning in biotechnology refers to the process of creating copies of organisms or copies of cells or DNA fragments (molecular cloning).
4. Dolly was the first mammal (Sheep) clone developed by Ian Wilmut and Campbell in 1997.
5. Dolly, the transgenic clone was developed by the nuclear transfer technique and the phenomenon of totipotency.
6. Totipotency refers to the potential of a cell to develop different cells, tissues, organs and finally an organism.
7. The mammary gland udder cells (somatic cells) from a donor sheep (ewe) were isolated and subjected to starvation for 5 days.
8. The udder cells could not undergo normal growth cycle, entered a dormant stage and became totipotent.
9. An ovum (egg cell) was taken from another sheep (ewe) and its nucleus was removed to form an enucleated ovum.
10. The dormant mammary gland cell/udder cell and the enucleated ovum were fused.
11. The outer membrane of the mammary cell was ruptured allowing the ovum to envelope the nucleus.
12. The fused cell was implanted into another ewe which served as a surrogate mother.
13. Five months later dolly was born.
14. Dolly was the first animal to be cloned from a differentiated somatic cell taken from an adult animal without the process of fertilization.

Advantages of Cloning Animals:

1. Offers benefits for clinical trials and medical research. It can help in the production of proteins and drugs in the field of medicine.
2. Aids stem cell research.
3. Animal cloning could help to save endangered species.

Disadvantages of Cloning Animals:

1. The process is tedious and very expensive.
2. It can cause animals to suffer.
3. It might compromise human health through consumption of cloned animal meat.
4. Cloning can lead to occurrence of genetic disorders in animals.

20. உயிரி தொழில்நுட்பத்தின் பயன்பாடுகள் யாவை?

What are the Applications of Bio – Technology?

Applications of Biotechnology

1. Biotechnology is one of the most important applied interdisciplinary sciences of the 21st century.
2. It is the trusted area that enables us to find the beneficial way of life.
3. Biotechnology has wide applications in various sectors like agriculture, medicine, environment and commercial industries.
4. This science has an invaluable outcome like transgenic varieties of plants e.g. transgenic cotton (Bt-cotton), rice, tomato, tobacco, cauliflower, potato and banana.
5. The development of transgenics as pesticide resistant, stress resistant and disease resistant varieties of agricultural crops is the immense outcome of biotechnology.
6. The synthesis of human insulin and blood protein in E.coli and utilized for insulin deficiency disorder in human is a breakthrough in biotech industries in medicine.
7. The synthesis of vaccines, enzymes, antibiotics, dairy products and beverages are the products of biotech industries.
8. Biochip based biological computer is one of the successes of biotechnology.
9. Genetic engineering involves genetic manipulation, tissue culture involves aseptic cultivation of totipotent plant cell into plant clones under controlled atmospheric conditions.
10. Single cell protein from Spirulina is utilized in food industries.
11. Production of secondary metabolites, biofertilizers, biopesticides and enzymes.
12. Biomass energy, biofuel, Bioremediation, phytoremediation for environmental biotechnology.

21. லார்வினிசம் மற்றும் நியோ - லார்வினிசத்தின் கொள்கைகள் மற்றும் குறிக்கோள்கள் பற்றி எழுதுக.

Write about principles and Objectives of Darwinism and Neo – Darwinism.

Principles of Darwinism:

i. Overproduction

1. Living beings have the ability to reproduce more individuals and form their own progeny.
2. They have the capacity to multiply in a geometrical manner. This will increase reproductive potential leading to overproduction.

ii. Struggle for existence

1. Due to over production, a geometric ratio of increase in population occurs. The space to live and food available for the organisms remain the same.
2. This creates an intense competition among the organisms for food and space leading to struggle.

The struggle for existence are of three types:

1. Intraspecific struggle: Competition among the individuals of same species.
2. Interspecific struggle: Competition between the organisms of different species living together.

3. Environmental struggle: Natural conditions like extreme heat or cold, drought and floods can affect the existence of organisms

iii. Variations

The occurrence of variation is a characteristic feature of all plants and animals. Small variations are important for evolution.

iv. Survival of the fittest or Natural selection

During the struggle for existence, the organisms which can overcome the challenging situation, survive and adapt to the surrounding environment.

v. Origin of species

According to Darwin, new species originates by the gradual accumulation of favourable variations for a number of generations.

Objections to Darwinism:

1. Darwin failed to explain the mechanism of variation.
2. Darwinism explains the survival of the fittest but not the arrival of the fittest.
3. He focused on small fluctuating variations that are mostly non-heritable.

Neo Darwinism

1. Neo Darwinism is the interpretation of Darwinian evolution through Natural Selection as it has been modified since it was proposed.
2. New facts and discoveries about evolution have led to modifications of Darwinism and is supported by Wallace, Heinrich, Haeckel, Weismann and Mendel.
3. This theory emphasizes the change in the frequency of genes in population arises due to mutation, variation, isolation and Natural selection.

Mutation theory:

Hugo de Vries put forth the Mutation theory.

Mutations are sudden random changes that occur in an organism that is not heritable.

Salient features of Mutation Theory:

1. Mutations or discontinuous variation are transmitted to other generations.
2. In naturally breeding populations, mutations occur from time to time.
3. There are no intermediate forms, as they are fully fledged.
4. They are strictly subjected to natural selection.

22. இந்தியாவில் உள்ள வன வகைகளை விளக்குக.

Elucidate Forest types in India.

Indian forests perform an important role to make a healthy environment and it reduce air pollutions. Near about 22 percent of total Indian areas are covered with forest.

Classified in five major groups namely:

1. Moist tropical forest
2. Dry tropical forest
3. Montane temperate forest
4. Montane sub tropical forest
5. Alpine forest

Moist tropical forest:

1. Annual rainfall ranges between 200 and 250 cm, the mean annual temperature lies between 24 and 27.
2. The evergreen forests degenerate into semi evergreen forests

3. Forests are found along the Western Coast, in Upper Assam, lower slopes of the eastern Himalaya, Oriss plant varieties include bamboos, epiphytes, aini, semul, gutel, mundane, hopea, benteak, kadam irul, rosewood, haldu, kanju, bijasal, kusum, bomsum, Indian chestnut, litsea, holloch, champa and mesua, etc.

Dry tropical forest:

1. This types of forests mainly found in Indian Northern Hilly regions and some states of Southern India.
2. Average annual rainfall ranges varies from 51 cm to 151. During rainy season these types of forest completely decorate lush green leaves some significant trees of dry tropical forest are sal, acacia, mangoes and bamboo.

Montane temperate forest:

1. These types of forests are mainly generated in Northern middle Himalayas ranges
2. It takes about 201 cm average annual rainfalls to produce these types of forests.
3. Some significant trees of montane temperate forest are rhododendrons, ferns, oak, maple, juniper, deodar, chilgoza, etc.

Montane subtropical forest:

1. State of Assam, Nagaland, Mizoram, Meghalaya, Manipur, Arunachal Pradesh.
2. Mountain ranges of Western Ghats are also the abode of these types' forests.
3. Some significant trees of montane sub tropical forest are poonspar, cinnamon, rhododendron, sal, sandan, laburnum, pomegranate, olive, oleander, etc.
4. Littoral/Swamp Forests
5. **Region:** Andaman and Nicobar Islands
6. Delta area of the Ganga and the Brahmaputra Mahanadi, the Godavari and the Krishna deltas.
7. They have roots that consist of soft tissue so that the plant can breathe in the water.
8. It consists mainly of whistling pines, mangrove dates, palms, and bulletwood.
9. **Mangroves in India:** In India, the mangrove forests spread over 6,740 sq. Km which is 7% of the world's mangrove forests.

23. நீர்வாழ் சுற்றுச்சூழல் அமைப்பு மற்றும் அதன் வகைகளை விளக்குக.

Explain Aquatic ecosystem and its types.

1. Aquatic ecosystems are habitats in which living species interact.
2. Marine organisms are living species with an aquatic environment for their food, habitats, reproduction, and other vital functions.
3. They need water to survive. Water has characteristics that reflect the quality of the water body.
4. Land-based terrestrial ecosystems, an aquatic ecosystem is one that exists in and around a body of water.
5. Aquatic ecosystems are made up of colonies of creatures that are reliant on one another and their surroundings.
6. Marine ecosystems and freshwater ecosystems are the two main types of aquatic ecosystems. There are three types of freshwater ecosystems: lentic, lotic, and wetlands.
7. Freshwater Ecosystem
8. Freshwater is land-based water that is constantly cycling and has a low salt content Ex: Pond ecosystem.

9. Freshwater habitats cover 0.80% of the Earth's surface area and contain 0.009% of the world's total water. The net primary production is over 3%. They are home to 41% of the world's recognized fish species.

Classified into three categories:

1. **Lentic:** Pools, ponds ecosystems, and lakes are examples of still or slow-moving water, and it is home to both floating and rooted plants, algae, and animals

Lentic ecosystems comprise all standing water environments, such as lakes and ponds. These ecosystems are home to algae, rooted and floating-leaved plants, and crustaceans such as crabs and shrimp.

2. **Lotic:** rapidly moving water, for example, rivers and streams.

Range of insects, including beetles, mayflies, and stoneflies. River dolphins, beavers, otters, eels, minnows, and trout are among the creatures that call it home

3. **Wetlands:** The soil is inundated or saturated for at least a portion of the year. These are marshy areas that are frequently flooded and are home to a wide variety of plants and animals. Wetlands are home to water lilies, marshes, swamps, Northern Pikes, dragonflies.

Marine Ecosystem:

- Oceans and seas, including organisms
- Marine ecosystem occupies about 71 percent of the earth's surface, with an average depth of around 4000 meters.
- Freshwater rivers gradually drain into the ocean, and various species live at various depths of the sea or ocean.

The components of the marine ecosystem are:

- Ocean Ecosystems:** Turtles, crabs, krill, shrimp, clams, oysters, octopus, jellyfish, snakes, eels, fish, whales, dolphins, turtles, crocodiles, sea urchins, starfish, coral, molluscs, sharks, rays, skates, squid, chimaera, lobsters, turtles, frogs, salamanders, lizards, geckos, snakes, eels and other creatures live in the ocean
- Estuaries:** Estuaries are places where salt water mixes with freshwater.
 - This mixture causes salinity levels to rise. Saline water is less dense than freshwater.
 - Examples of estuaries include – tidal marshes, river mouths, and coastal bays.
- Coral Reefs:** These are fondly referred to as the Rain Forest of Oceans
Harbour a wide variety of aquatic flora and faunas. A coral reef is an aquatic ecosystem made up of corals.
- Coastal Ecosystem:** Coastal ecosystems are unique in their structure, variety, and movement.

24. இந்தியாவில் உள்ள பல்வேறு உயிர் புவியியல் மண்டலங்களை விவரிக்க.

Describe different Biogeographic Zones in India.

Trans-Himalayan Region:

- 5.6% of the total geographical area.
- The high altitude, cold and arid mountain areas of Ladakh, Jammu and Kashmir, North Sikkim, Lahaul and Spiti areas of Himachal Pradesh.
- This zone has sparse alpine steppe vegetation that supports several endemic species and is a suitable habitat for the world's largest populations of wild sheep and goats, as well as other rare fauna.
- The Snow Leopard and the migratory Blacknecked Crane (*Grus nigricollis*).
- This zone's cold, dry desert is an extremely vulnerable ecosystem.

Himalayan Zone:

1. 6.4% of the total geographical area
2. It contains some of the highest peaks in the world.
3. The Himalayan zone makes India one of the richest areas in terms of habitats and species.
4. East, northwest, west, and central Himalayas.
5. The alpine and subalpine forests, grassy meadows, and moist mixed deciduous forests provide diverse habitat for endangered bovid species such as Bharal.

Indian Desert Zone:

1. Arid region west of the Aravalli hill range, which includes both Gujarat's salty desert and Rajasthan's sand desert.
2. The Indian desert forms India's northern boundary, encompassing primarily the western and northwestern regions of Rajasthan, as well as a portion of the Kachchh region of Gujarat in the southwest.
3. It is 350-450 metres above sea level in the east at the Aravalli range, 100 metres in the south and west, and 20 metres in the Rann of Kachchh.
4. Wolf, Caracal Desert Cat.

Semi-arid Zone:

1. The semi-arid region, which accounts for 16.6% of the total geographical area.
2. It is a transition zone between the desert and the dense forests of the Western Ghats.
3. This zone includes the Punjab plains, Delhi, Haryana, Jammu and Kashmir's fringes, Himachal Pradesh's western edges, eastern Rajasthan, eastern Gujarat, and northwest Madhya Pradesh.
4. In Western India, the Semi-arid zone is characterised by savannah woodland, dry deciduous forest, and tropical thorn forest.
5. The heart of this zone is the Aravalli System, which is home to two types of vegetation: tropical dry deciduous forest and tropical thorn forest.

Western Ghats:

1. The Western Ghats accounts for 4% of the total geographical area.
2. It is one of India's major tropical evergreen forest regions and one of two biodiversity 'hot spots'.
3. Passing through the states of Gujarat, Maharashtra, Goa, Karnataka, Tamil Nadu, and Kerala.
4. The region is home to nearly 4000 species of flowering plants, accounting for nearly 27% of India's total flora. 1500 of these species are endemic.
5. The Western Ghats region is a significant genetic estate with a diverse array of ancient lineages.
6. The Western Ghats are home to viable populations of most of the vertebrate species found in peninsular India, as well as an endemic faunal element.
7. Nilgiri Langur, Lion Tailed Macaque, Grizzled Giant Squirrel, Malabar Civet.

Deccan Plateau:

1. 42% of the total geographical area.
2. It is a semi-arid region located in the rain shadow of the Western Ghats.
3. The zone is relatively homogeneous, with climates ranging from semi-arid to moist-deciduous/semi-evergreen.
4. This bio-geographic zone of peninsular India is by far the most extensive, covering India's finest forests, particularly in the states of Madhya Pradesh, Maharashtra, and Odisha.

5. The Vindhya and Satpura hill ranges, the Chhota Nagpur Plateau, the Eastern Ghats, the Tamil Nadu Plains, and the Karnataka Plateau are all part of the central highlands. The Vindhya and Satpura hill ranges are famous for their diverse flora.

North East Region:

1. The North East Region accounts for 5.2 percent of the total geographical area.
2. The North-East is thus a biogeographical 'gateway' for much of India's fauna and flora, as well as a biodiversity hotspot (Eastern Himalaya).
3. Many of the species that contribute to this biological diversity are either restricted to the region itself or to smaller localised areas of the Khasi Hills.

Islands:

1. This zone, which accounts for 0.3% of India's total geographical area, is one of the three tropical moist evergreen forest zones.
2. The islands are home to unique flora and fauna. These islands are high endemism hotspots, with some of India's finest evergreen forests and a diverse range of corals. The Lakshadweep Islands are a group of 27 small islands located in the Arabian Sea. They are 320 kilometres from Kerala's coast.
3. The Andaman and Nicobar Islands are a 348-island group in the Bay of Bengal that runs north-south.
4. In India, only the Andaman and Nicobar Islands have endemic island biodiversity. Some of the endemic fauna of the Andaman and Nicobar islands include the Narcondam hornbill and the South Andaman krait.

Coastal Region:

2.5 percent of total geographical area, and its sandy beaches, mangroves, mud flats, coral reefs, and marine angiosperm pastures make it India's wealth and health zone.

25. 'இந்தியா மெகா பன்முகத்தன்மை கொண்ட நாடு' – விளக்குக.

'India as a Mega Diversity Nation' – Illustrate.

1. Mega diversity refers to a country's ability to exhibit a high level of biodiversity. A biologically diverse nation has at least 5,000 plant species and must be bordered by marine ecosystems.
2. India is one of the world's megadiverse countries, with 45,000 plant species and twice as many animal species.
3. India has only 2.4 per cent of the world's land area, but it has 8.1 per cent of the world's species diversity.
4. Making it one of the world's 12 mega diversity countries.

Flora and Fauna in India:

1. The rich flora and wildlife of India are well-known.
2. India is home to about 500 mammalian species.
3. Over 200 avian species, and over 30,000 insect species.
4. Mega Diversity Hotspots in India
5. Sundaland
6. Indo-Burma Region
7. The Himalayas
8. The Western Ghats

Sundaland:

1. Sundaland is a South-East Asian hotspot that includes south-east Asian countries of Indonesia, Singapore and others.

- Sundaland was designated as a World Biosphere Reserve by the UN System in 2013. Sundaland is among the world's ecologically richest regions with 25,000 varieties of vascular plants, 15,000 of which are unique to this region.

Indo-Burma Region:

- The Indo-Burma region covers a total area of 2,373,000 km². Annamite Muntjac, Leaf Deer, Annamite Striped Rabbit, Saola Grey-shanked Douc, Large-antlered Muntjac, are six large animal species that have been.
- The Grey-crowned Crocias, Orange-necked Partridge and White-eared Night-heron are among the 1,300 bird species found here.

Himalayan Region:

- The Himalayas are the world's highest mountain range, with nine of the ten highest peaks, including Mount Everest.
- There are over 10,000 plant species found here, 3160 of which are indigenous. This mountain range spans almost 750,000 square kilometres.

The Western Ghats:

- The Western Ghats run along the western end of Indian Region, encompassing the majority of India's deciduous and rain forests.
- They are home to approximately 325 species of globally vulnerable flora, animals, birds, amphibians, reptiles, and fish, according to UNESCO.
- A more temperate climate can be found at elevations of 1,500 m (4,921 ft) and above in the north and 2,000 m (6,562 ft) and above in the south. The annual average temperature is roughly 15 degrees Celsius.

26. தமிழ்நாட்டில் உள்ள பல்வேறு பல்லுயிர் வாழ்விட மையம் பற்றி எழுதுக.

Write about various Biodiversity hotspots in Tamil Nadu.

- Region should have at least 1500 species of vascular plants
- It should have a high degree of endemism
- 30% (or less) of its original habitat, i.e. it must be threatened.

Western Ghats:

- The Western Ghats, also known as the Sahyadri Hills.
- The range is called Sahyadri in northern Maharashtra. Sahya Parvatham in Kerala.
- Northern portion of the narrow coastal plain between the Western Ghats and the Arabian Sea is known as the Konkan Coast.
- Central portion is called Kanara.
- Southern portion is called Malabar region or the Malabar Coast.
- The Western Ghats are present along the western edge of peninsular India and covers most of the deciduous forests and rain forests.
- As per UNESCO, it is home to at least 325 globally threatened flora, fauna, bird, amphibian, reptile and fish species.
- The vegetation in this region was spread over 190,000 km² but has been now reduced to 43,000 km².
- The region is also known for the globally threatened flora and fauna represented by 229 plant species.
- 31 mammal species, 15 bird species, 43 amphibian species, 5 reptile species and 1 fish species. UNESCO mentions that "Of the total 325 globally threatened species in the Western Ghats, 129 are classified as Vulnerable, 145 as Endangered and 51 as Critically Endangered."

27. கிராமலயா பயிற்சி மையம் - நீர் மற்றும் சுகாதாரத்திற்கான தேசிய நிறுவனம் (NIWAS) பற்றி எழுதுக.

Write about Gramalaya training centre - National Institute for water and Sanitation (NIWAS).

1. Gramalaya has been involving the Community Based Organisations (CBOs) for implementing and monitoring of its all projects at both urban and rural areas.
2. One of such CBO is called as WASHMAN Committee.
3. This committee consists of both Men and Women with a maximum no., 20 members.
4. They are allowed for the monthly savings and internal lending among themselves.
5. In this committees, the members who are volunteers of the project and selected by Gramalaya to extend their service for development of their village / slum by implementing WASHMAN approach.
6. These volunteers are nurtured by providing regular training and capacity building, Exposure visit to the role model villages, and handholding support at the field by Gramalaya.
7. These committees should ensure the sustainability and long lasting the Behavioral Change Communication (BCC) among the community members
8. The Dr. Syama Prasad Mookerjee National Institute of Water and Sanitation (SPM-NIWAS) was recently inaugurated in Kolkata,
9. The institute, which has a budget of Rs 100 crore, is located on 8.72 acres of land at Joka, Diamond Harbour Road, and Kolkata is being established by the Department of Drinking Water and Sanitation (DDWS).
10. The goal of SPM-NIWAS is to address the gap in knowledge and capacity in the field of public health engineering, sanitation, and hygiene through a variety of courses ranging from engineering to management, health, accounting, law, and public policy.

Key Points:

1. To prioritize water service delivery and address any issues in this area.
2. The DDWS has set up various sanitation models at the SPM-NIWAS institute for educational and awareness-building purposes, including Eco-San Toilets, Septic Tanks, Tiger Toilets, Twin Pit Toilets, NADEP Composting Pits, Vermicomposting Tanks, Sanitation Chambers, Magic Pits, Soak Pits, Water Stabilization Ponds, and Constructed Wetlands.

28. அறிவியல், தொழில்நுட்பம் மற்றும் புத்தாக்கக் கொள்கை- 2013 இன் முக்கிய அம்சங்களை விளக்குக.

Elucidate the salient features of Science, Technology and Innovation Policy- 2013.

1. India's first Scientific Policy Resolution was announced on 1958.
2. STI POLICY OF 2013 was prepared by Department of Science and Technology with in the ministry of science and technology.
3. This involves both in the private and public domain, majorly **focus on faster, sustainable and inclusive development of the people.**
4. It has set A Strong and viable Science, Research and Innovation system for High Technology led path for India (**SRISHTI**) as the goal
5. Promotion of scientific temper amongst all sections of society.
6. Increase the number of R&D personnel by 66% in next five years.
7. India's share in high tech products is around 8% globally While India barely spends around 1% of its GDP in research, Development, innovation. Therefore, Policy says, we'll increase the spending in sci-tech-innovation to 2% in next five years.
8. Skill Enhancement for applications of science among the youth from all social sectors.
9. Establishing the world-class infrastructure for R&D for gaining global leadership in some select frontier areas of science.

10. Aim of Positioning India among the top five global scientific powers by 2020 (by increasing the share of global scientific publications from 3.5% to over 7% and quadrupling the number of papers in the top 1% journals from the current levels).
11. Creating an environment for enhanced **private sector participation** in R &D, as well as establishing **new PPP structures**.
12. **Replicating hitherto successful models** by making R and D a societal and commercial application
13. **Modifying IPR policy** to provide for marching rights for social good when supported by public funds and for co-sharing, IPRs generated under PPP.
14. **Sharing of IPRs** between inventors and investors which in turn leads to exchange of knowledge
15. Achieve gender parity in S&T

29. இந்திய விண்வெளி ஆய்வு நிறுவனத்தின் (ISRO) முக்கிய மைல்சுட்டிகள் விளக்குக.

Illustrate the major milestones of Indian Space Research Organisation (ISRO).

1. 1975-76, Satellite Instructional Television Experiment (SITE) was conducted and was hailed as 'the largest sociological experiment in the world'
2. First Indian spacecraft 'Aryabhata' was developed and launched using a Soviet Launcher.
3. Development of the first launch vehicle SLV-3 with a capability to place 40 kg in Low Earth Orbit (LEO), which had its first successful flight in 1980.
4. **AstroSat** It is the first dedicated Indian astronomy mission aimed at studying celestial sources in X-ray, optical and UV spectral bands simultaneously.
5. **Mars Orbiter Mission (MOM)** (Mangalyaan) the maiden interplanetary mission of ISRO, successfully got inserted into Martian orbit in its first attempt. Aim of studying Martian surface and mineral composition as well as scan its atmosphere for methane (an indicator of life on Mars).
6. **Chandrayaan-1**, India's first mission to moon, was an unmanned.
7. **Chandrayaan-2**, India's second mission to the Moon is a totally indigenous mission comprising of an Orbiter, Lander and Rover. Aim of exploring elemental abundance, lunar exosphere and signatures of hydroxyl and water-ice.
8. **India's Manned Mission to Space:** Gaganyaan to be launched in 2023. Under this mission. There will be two unmanned flights and one human spaceflight.
9. The Gaganyaan system module, **called the Orbital Module** will have three Indian astronauts, including a woman.
10. **IN-SPACE: provide a level playing field for private companies** to use Indian space infrastructure.
11. **NewSpace India Limited (NSIL):** Under the administrative control of the Department of Space. It is the commercial arm of ISRO. Headquartered in Bengaluru.
12. **Indian Space Association (ISpA):** The collective voice of the Indian Space industry.

30. பிக் டேட்டா என்றால் என்ன? அதன் முக்கியத்துவம் மற்றும் பயன்பாடுகளை விளக்குக.

What is big data? Explain its significance and applications.

1. Big data is a combination of structured, semistructured and unstructured data collected by organizations.
2. It can be mined for information and used in machine learning projects, predictive modeling and other advanced analytics applications.
3. Large volume of data in many environments;
4. Wide variety of data types frequently stored in big data systems
5. Velocity at which much of the data is generated, collected and processed.

6. Power Discoms use data collected from last-mile to cut down their Aggregate Technical & Commercial losses.
7. Security agencies and Police forces use big data to,
8. Prevent cyber-attacks
9. Enhance security systems
10. Detect card-related fraud cases
11. Predict criminal activities, g – Crime and Criminal Tracking Networks and Systems (CCTNS)
12. To improve quality of education.
13. Disaster Management: In understanding and mitigating the risks of disasters.

31. தேசிய சூப்பர் கம்ப்யூட்டிங் மிஷன் ஆய்வு செய்க.

Examine the National Supercomputing Mission.

1. Proposed to create a cluster of seventy supercomputers connecting various academic and research institutions across India.
2. Being jointly directed by the **Department of Science and Technology (DST)** and the **Ministry of Electronics and Information Technology (MeitY)**. And **implemented** by the Centre for Development of Advanced Computing (C-DAC), Pune, and the IISc, Bengaluru.
3. It adds strength '**Digital India**' and '**Make in India**' initiatives.
4. In April 2015 the government approved the NSM with a total outlay of Rs.4500 crore for a period of 7 years.
5. The mission was set up to provide the country with supercomputing infrastructure to meet the increased computational demands of academia, researchers, MSMEs, and startups by creating the capability design, manufacturing, of supercomputers indigenously in India.
6. Currently, there are four supercomputers from India in the Top 500 list of supercomputers in the world.
7. The target was to establish a network of supercomputers ranging from a few Tera Flops (TF) to Hundreds of Tera Flops (TF) and three systems with greater than or equal to 3 Peta Flops (PF) in academic and research institutions of National importance across the country by 2022.
8. This network of Supercomputers envisaging a total of 15-20 PF was approved in 2015 and was later revised to a total of 45 PF (45000 TFs), a jump of 6 times more compute power within the same cost and capable of solving large and complex computational problems.
9. The supercomputer was established earlier this year, under the National Supercomputer Mission (NSM) and is going to be installed in the Centre for Development of Advanced Computing's (C-DAC) unit.

Supercomputers developed in India are:

1. **Mihir:** Mihir (146th on the list), clubs with Pratyush to generate enough **computing power** to match **PARAM-Siddhi**.
2. **PARAM-Siddhi:** It is the **high-performance computing-artificial intelligence (HPC-AI)** supercomputer, and has achieved a global ranking of 62 in the TOP 500 most powerful supercomputer systems in the world.
3. **Pratyush:** It is a supercomputer used for weather forecasting at the Indian Institute of Tropical Meteorology, ranked 78th on the November edition of the list.

4. **PARAM Shivay**, -It is the first supercomputer assembled indigenously, was installed in IIT (BHU), followed by PARAM Shakti, PARAM Brahma, PARAM Yukti, PARAM Sanganak at IIT-Kharagpur IISER, Pune, JNCASR, Bengaluru and IIT Kanpur respectively.

32. நிதி தொழில்நுட்பம் என்றால் என்ன? தமிழ்நாடு ஃபின்டெக் கொள்கை - 2021 இன் முக்கிய அம்சங்களை விளக்குக.

What is Financial Technology? Explain the salient features of Tamil Nadu FinTech Policy – 2021.

1. Fintech (financial technology) refers to emerging digital technology for improving and automating financial services, in terms of delivery and usage.
2. Variety of functions is enabled by specialized softwares, algorithms and more recently,
3. Use of cryptocurrencies like Bitcoins.
4. Use in wide range of sectors like education, retail banking, investment management, non-profit fundraising, etc
5. Tamil Nadu Fintech Policy 2021 is formulated with the following objectives:
6. To transform Tamil Nadu into a leading global destination for FinTech firms by 2025.
7. To increase financial inclusion and fintech adoption rate in Tamil Nadu by promoting digital solutions for the traditional financial sector.
8. To develop a comprehensive and concerted program with government agencies to provide a one-stop shop solution to existing and new FinTech firms in the State.
9. To facilitate seamless and transparent Business-to-Business (B2B), Business-to-Consumer (B2C), Government-to-Government (G2G), Government -to-Business (G2B), and Government-to-Citizen (G2C) financial transactions efficiently.
10. To develop industry-academia linkages to create a FinTech knowledge ecosystem comprising universities, research institutions, design & innovation labs, and FinTech firms.
11. To develop, attract, and nurture talent in the fields of finance and digital technologies.
12. To develop the necessary infrastructure required for attracting and promoting the next generation of FinTech firms.
13. To develop partnerships with other leading FinTech centres across the world
14. To become the leading State in the country in terms of growth of new FinTech firms incorporated during the Policy period.
15. To develop a FinTech city in the State with 1 million square feet of working space for FinTech firms with a world class FinTech Innovation Hub/FinTech Lab.
16. To set up Skill Centres for FinTech in the State in partnership with premier institutes & private firms which shall also serve as Centres of Excellence (CoEs) to support entrepreneurs/ SMEs/ startups in the State.

33. ஜிப்ராஃபிஷ் மற்றும் அதன் முக்கியத்துவம் பற்றி எழுதுக.

Write about Zebrafish and its importance.

1. **Zebra fish** (*Brachydanio rerio*) is a small tropical freshwater fish originating in the Ganges River and its tributaries.
2. The zebrafish is a tropical fish native to Southeast Asia.
3. optical transparency of embryos and larvae
4. Zebrafish have already been used to help unlock a number of the biological processes behind muscular dystrophy , and are an important model for understanding the mechanisms of development and diseases such as cancer
5. Zebrafish have a similar genetic structure to humans. They share 70 per cent of genes with us.

6. zebrafish breed readily and can produce as many as 50 to 300 eggs at a time
7. 84 per cent of genes known to be associated with human disease have a zebrafish counterpart.
8. As a vertebrate, the zebrafish has the same major organs and tissues as humans. Their muscle, blood, kidney and eyes share many features with human systems.
9. Zebrafish have the unique ability to repair heart muscle.
10. For example, if part of their heart is removed they can grow it back in a matter of weeks.
11. Scientists are working to find out the specific factors involved in this process
12. To develop ways of repairing the heart in humans with heart failure or who have suffered heart attacks.

34. குளிர்சாதனப் பெட்டி செயல்படும் விதத்தை விவரி.

Describe how a refrigerator works?

1. A refrigerator is a Carnot machine working in opposite direction.
2. The active material receives heat Q_L from the cold material (heat sink) at low temperature T_L .
3. A certain amount of work W is done on the work material by the compressor and the work material discharges a quantity of heat Q_H to the heat source, ie discharges to ambient at T_H temperature.
4. You can feel the warm air when you stand it next to the fridge. From the first law of thermodynamics

$$Q_L + W = Q_H$$

5. Eventually the refrigerator gets colder. The environment (kitchen) or (atmosphere) heats up.

Coefficient of performance (COP)

1. Coefficient of performance (COP) is a measure of the efficiency of a refrigerator. Coefficient of efficiency is defined as the ratio of the heat received from the refrigerant (heat sink) to the external work (W) done by the compressor.

$$COP = \beta = \frac{Q_L}{W}$$

$$\beta = \frac{Q_L}{Q_H - Q_L}$$

$$\beta = \frac{1}{\frac{Q_H}{Q_L} - 1}$$

But as we know

$$\beta = \frac{1}{\frac{Q_H}{Q_L} - 1} = \frac{T_L}{T_H - T_L}$$

$$\frac{Q_H}{Q_L} = \frac{T_H}{T_L}$$

From the coefficient of performance of the refrigerator we can infer the following.

2. The higher the COP, the better the refrigerator will run. A good refrigerator's COP is around 5 to 6.
3. The lower the difference between the temperatures of the cooling chamber of the refrigerator and the temperature of the environment (room), the higher the COP of the refrigerator.
4. Work is done in a refrigerator where heat is removed from a colder substance and transferred to a hotter substance. Heat energy cannot flow from a colder object to a hotter object without doing

work. This does not contradict the second law of thermodynamics. Because heat is given to the surrounding air. And the total entropy (refrigerator + environment) always rises.

35. எதிரொலிகள் என்றால் என்ன? எதிரொலிக்கான நிபந்தனைகள் மற்றும் பயன்பாடுகளை குறிப்பிடுக.

What are resonances? State the terms and applications of resonance.

Applications of echo

1. Some animals use sound signals to communicate with each other when they are far away and detect nearby objects by echoes.
2. Echo is also used to find the speed of sound in media.

Applications of Acoustic Echo:

Sound Echo Card:

1. It is usually curved (concave) surfaces. These are used to enhance the sound quality in arenas and concert halls. The amplifier is mounted on the focal point of the acoustic reverberant.
2. The sound from the loudspeaker is echoed by the sound echo card and reaches the audience with high quality.

Hearing aids:

It is a hearing aid. It is used for hearing impaired people. One end of this instrument is wide and the other end is narrow, and the sound from the sound source reverberates off the wall of the wide section and reaches the narrow section.

Cone Loudspeaker:

1. A Cone loudspeaker is a tube-shaped instrument used to address small crowds. One end of it is wide and the other end is narrow.
2. A sound spoken in a narrow area creates multiple reverberations. So sound can be heard with greater intensity at greater distances through a wider area.

Benefits of Multiple Resonance:

Musical Instruments:

1. All musical instruments such as loudspeakers, pipes, nathaswaram, chenai, tarai etc. are designed so that the sound propagates in a particular direction.
2. These instruments consist of a tube followed by a cone-shaped structure that amplifies the sound and moves it forward towards the listener.
3. Stethoscope

Benefits of Acoustic Echo:

(a) Heart rate monitor: It works on the principle of multiple echo of sound.

1. It consists of three parts:
2. Placement on the heart
3. Auricular part
4. Rubber hose
5. Placement on the heart: It is a small plate-shaped resonant membrane. It makes the sound very sensitive. and amplifies the perceived sound.
6. Rubber tube: It connects the cardiac catheter to the auricular catheter. The membrane of the auricle carries the sensed sound to the auricle.

(b) Reverberation: A sound reflected by a wall or hill or any sound barrier surface and heard repeatedly is called reverberation.

(c) SONAR: Sound Navigation and Ranging. An instrument for searching and locating in the sea by means of sound echoes. Sonar equipment is used to sense the position or movement of an object in water using echoes of sound.

36. தொலைநோக்கிகள் என்றால் என்ன? அதன் வகைகளை விவரி.

What are telescopes? Describe its types.

1. Lunar eclipse cannot be seen clearly with naked eyes. Binoculars help us see distant objects clearly.
2. Optical instruments used to see distant objects are called telescopes.
3. In 1608, the first telescope was developed by Johan Libresche. Galileo built a telescope to observe the stars.
4. He saw a magnified image of a distant weather gauge through a lens kept in the shop of an eyeglass shopkeeper. He made the telescope based on this.

Types of remote sensing:

1. Optical diffraction telescopes.
2. Light reflection telescopes are classified into two types.
3. 'Lens' are used in refracting telescopes. Examples of refracting telescopes are the Galileo telescope, the Kepler telescope, and achromatic refractors.
4. Reflector telescopes use 'planetary oscillators'. Gregorian, Newtonian, Gasgrain telescopes are examples of reflecting telescopes.

Telescopes are based on objects that can be seen using telescopes

1. Astronomical telescopes
2. Terrestrial telescopes

Astronomical Telescopes:

These are used to observe celestial objects like planets, stars, galaxies, sub-planets etc.

Terrestrial Telescopes:

The final image available in astronomical telescopes is the overhead image.

Advantages of binoculars:

1. Gives a detailed view of planets, stars, galaxies.
2. Aerial objects can be photographed by attaching a camera to the telescope.
3. The telescope can also be used in low intensity light.

Disadvantages:

1. Regular maintenance of telescopes.
2. These cannot be easily transported elsewhere.

37. X - கதிரின் பயன்பாடுகள் பற்றி எழுதுக.

Write about the uses of X-ray.

X-rays are used in various fields. We will list some of them.

Diagnosis in Medicine:

1. X-rays penetrate muscles more easily than bones.
2. This results in an X-ray with deep shadowing of the bones and superficial shadowing of the muscles.
3. X-rays are used to diagnose bone fractures, foreign bodies inside the body, and diseased body parts.

Medical treatment:

Since X-rays can destroy diseased tissue, they are used to cure skin diseases, cancerous tumors etc.

Industry Sector:

1. X-rays are used to check for cracks in welded joints, automobile tires, tennis balls, and wood.
2. They are also used to detect and seize prohibited items at customs gates.

Scientific Research:

The X-ray fringe effect is an excellent tool for understanding the structure of crystalline materials - that is, the arrangement of atoms and molecules in crystals.

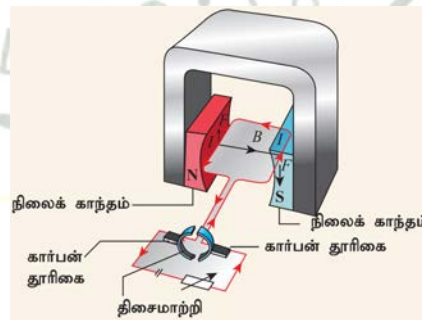
38. மின்மோட்டார் என்றால் என்ன? அதன் அமைப்பு மற்றும் செயல்படும் விதத்தை விவரி.

What is electric motor? Explain its structure and working Principle.

- 1) An electric motor is a device that converts electrical energy into mechanical energy. Electric motors are important in modern life. They are used in water pump, fan, washing machine, juicer, flour mill etc.
- 2) We have already studied that a force acts on a conductor placed in a magnetic field and causes the conductor to move. This is the principle of electric motor.
- 3) To understand how a motor works, it is necessary to understand how the turning effect occurs on an electric coil placed inside a constant magnetic field.
- 4) A simple coil of wire is placed between two poles of a magnet. Now look at the segment AB of the coil of wire. The direction of current is towards B, but the direction of current is opposite in conductor section CD.
- 5) Since the currents flow in opposite directions in conductor segment AB and CD, their directions of motion are also opposite according to Fleming's left-hand rule. The force on both ends of the coil of wire is in opposite directions so they rotate.
- 6) If the current is through ABCD, the coil of wire will rotate first clockwise and then anti-clockwise. If the coil is to operate in the same direction i.e. clockwise, the current must flow through ABCD in the first half of the cycle and through DCBA in the second half. A small device called a split ring diverter is used to change the direction of the current.
- 7) There is no current in the coil when the gap in the split loop is connected to terminals X and Y. But, as the coil moves, it continues to move forward and one of the two split rings comes into contact with the carbon brushes X and Y. This reversal of current occurs every half cycle and causes continuous rotation in the coil.

The rotational speed of the coil can be increased by the following factors:

- 1) Increasing the strength of the current in the wire coil.
- 2) Increasing the number of wire coils
- 3) Increasing the surface area of the wire coil
- 4) Increasing the strength of the magnetic field.



39. காஸ் விதியை விவரித்து மற்றும் அதன் நடைமுறை பயன்பாடுகளை வரிசைப்படுத்துக?

Explain Gauss Law and list out its Pratical Applications?

Gauss's law

- 1) According to Gauss' law, the total flux attached to a closed surface is $1/\epsilon_0$ times the charge attached by the closed surface.
- 2) For example, a point charge q is placed inside a cube of edge 'a'. Now, according to Gauss' law, the flux on each face of the cube is $q/6\epsilon_0$.
- 3) Electric field is the basic concept of knowledge about electricity. Generally, the electric field of a surface

is calculated by using Coulomb's law, but to calculate the electric field distribution on a closed surface, we need to understand the concept of Gauss's law.

- 4) It describes a closed electric charge or an electric charge on a closed closed surface.

Applications of Gauss' Law:

- 1) Electric field due to a uniformly charged infinite straight wire.
- 2) Electric field due to uniformly charged infinite plate sheet.
- 3) Electric field due to a uniformly charged thin spherical shell.
- 4) Choose Gaussian surface, estimation of electric field becomes easy.
- 5) Use symmetry to simplify problems.
- 6) Remember, the Gaussian surface does not necessarily coincide with the real surface, i.e. the Gaussian surface can be inside and outside.

40. மீத்திரன் கணிப்பொறி என்றால் என்ன? இந்தியாவில் மீத்திரன் கணிப்பொறி தோன்றி வளரும் விதத்தை குறித்து எழுதுக.

What is supercomputer? Trace the origin and development of supercomputers in India.

Supercomputer:

- 1) Supercomputers have a higher level of computing performance compared to a normal utility computer.
- 2) Its performance is measured in FLOPS (floating point operations per second).
- 3) High speed and good memory are two requirements of a super computer.
- 4) Performance is usually rated in petaflops (1 followed by 15 zeros). The memory is on average 250000 times that of a typical computer.

Origin of super computer:

- 1) Param 8000 was India's first supercomputer.
- 2) Developed in 1991, it is a series of gigaflop supercomputers developed by Vijay B Bakhtar, who is known as "the architect of India's initiative in supercomputing".
- 3) PARAM stands for 'Parallel Machine' and was developed by Center for Advanced Computer Development (CDAC). Difficulties in procuring supercomputers from abroad culminated in the development of India's first indigenous supercomputer.
- 4) 256 - Developed as a nozzle engine, which was exported to Germany, England and Russia.
- 5) India's fastest supercomputer is Param Siddhi-AI.
- 6) PARAM series of supercomputers include PARAM 8600, PARAM 9000 and PARAM 10000. They are used for both public and private purposes.
- 7) PARAM – Siddhi - Ranked 62nd globally.

National Supercomputing Mission:

- 1) The National Supercomputing Mission (NSM) was launched in 2015 with the objective of making India one of the leading countries in supercomputing and improving its ability to solve challenging problems of national and international importance.
- 2) It also tried to equip the scientific community with avant-garde technologies to carry out world-class research in their respective fields.
- 3) It helps in "Digital India" and "Make in India" initiative.

41. இந்தியாவில் பெட்ரோலியம் மற்றும் இயற்கை எரிவாயு அகழாய்வுபற்றி விரிவாக விளக்குக.

Explain in detail about Petroleum and natural gas explorations in India.

- 1) Influencing decision making for all other major sectors of the economy.
- 2) India's economic growth is closely related to its energy demand, hence, demand for oil and gas is expected to increase, making the sector more investment-friendly.
- 3) As of 2021, India retained its position as the world's third largest oil consumer.

- 4) Government has adopted many policies to fulfill the increasing demand. It has allowed 100% Foreign Direct Investment (FDI) in several sectors of the sector including natural gas, petroleum products and refineries.
- 5) The FDI limit for public sector refinery projects has been raised to 49%, without any disinvestment or dilution of domestic equity in existing public sector enterprises.
- 6) Today it attracts both domestic and foreign investment, as attested by the presence of companies like Reliance Industries Limited (RIL) and (GAIL) India.
- 7) The industry is expected to attract USD 25 billion in investment in exploration and production by 2022.
- 8) India is already a refining hub with 21 refineries, and expansion is planned to tap foreign investment in export-oriented infrastructure, including product pipelines and export terminals.
- 9) India's consumption of petrol products during April-October, 2022 was 126.12 MMT.
- 10) India's LNG imports in October 2022 stood at 2,411 million metric standard cubic meters (MMSCM).
- 11) The total production of LNG in the same month was 2,883 mmscm.
- 12) Exports of petroleum products from India reached 62.7 MMT in FY22.
- 13) Natural Gas Corp Limited (ONGC) Company Rs. 6,000 crore (US\$ 800 million) in its petrochemicals division (ONGC Petro Additions Ltd.) to meet its equity requirements.
- 14) Hydrocarbon Exploration and Licensing Policy (HELP), newly formulated Hydrocarbon Exploration and Licensing Policy.

(15 MARKS)

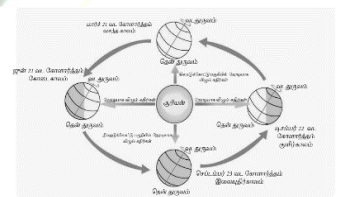
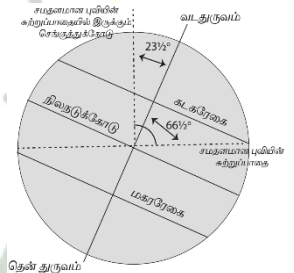
1. பூமியின் இயக்கம் மற்றும் அதன் விளைவுகளை விளக்குக.

Explain the motion of earth and its effects.

- ✓ Earth has two basic motions. They are,
 - Rotation of the earth itself.
 - Revolution around itself and around the sun.

Rotation:

- ✓ The rotation of the earth around its axis is called rotation.
- ✓ Earth's axis is an imaginary line passing through the center of the Earth. Earth takes 23 hours, 56 minutes and 4.09 seconds to revolve around itself.
- ✓ It rotates eastward in the direction opposite to the apparent motion of the Sun. The Earth's axis is inclined by $66\frac{1}{2}^\circ$ to the plane of the Sun and $23\frac{1}{2}^\circ$ to the vertical on its own axis.
- ✓ Earth's rotational speed varies from equator to pole. Earth's rotational speed is highest at the center of the Earth.
- ✓ Here the velocity of the earth is 1,670 km per hour. The rotation speed of the Earth is approximately rotational at the poles.



Effects of Earth's Rotation:

- ✓ The appearance of the sun rising and setting is due to the rotation of the earth. As a result, day and night appear alternately on the earth's surface.
- ✓ Earth's rotation is the reason for the different time observed at different places of the earth.
- ✓ 360 degrees divided by 24 hours gives a difference of 4 minutes for each longitude crossing the Sun. Thus an hour (60 minutes) is 1/24th of a day.
- ✓ If you observe closely while traveling in a moving train, the trees, houses and fields near the track, the sun, earth and other celestial objects appear to be moving in the opposite direction to the direction of the train.

- ✓ As the Earth rotates from west to east, the sun, moon, planets and stars all appear to appear in the east and set in the west.
- ✓ The Coriolis force is generated by the Earth's rotation. This causes wind and ocean waves to deviate from their path.
- ✓ Ocean currents are formed not only by the gravitational forces of the Sun and the Moon but also by the rotation of the Earth.

Circle of Illumination:

- ✓ The line around the Earth that separates light from darkness is called the Circle of Illumination.

Earth revolves around itself and revolves around the Sun (Revolution).

- ✓ Earth's counterclockwise rotation around the Sun in its elliptical orbit is called Sun's orbit.
- ✓ Earth is 150 million km away from Sun in its orbit. Circling at a distance of meters. The distance between the Sun and the Earth varies with time due to the elliptical orbits of the planets.
- ✓ Earth will be closest to the Sun on January 3. It is called Perihelion.
- ✓ At this point the distance between Earth and Sun is 147 million km. is meter.
- ✓ On 4th July Earth will be seen far away from Sun. This is called Aphelion.
- ✓ At this point the distance between Earth and Sun is 152 million km. is meter.
- ✓ Difference between spinning and crawling.
- ✓ The time taken by the earth to go around the sun once is called a year.
- ✓ Earth takes 365 days and 6 hours or 365/4 days to go around the Sun once.
- ✓ Effects of earth creep.
- ✓ The following effects are caused by the Earth's orbit around the Sun.
- ✓ Cycle of seasons.
- ✓ Time difference between day and night.
- ✓ Diffusion of solar radiation on Earth's surface and troposphere.

Rotation	Revolution
Earth rotates on its axis from west to east	The motion of the Earth around the Sun in an elliptical orbit
A round takes 24 hours. (one day) this	One crawl takes 365 1/2 days (one year).
An everyday occurrence	It is an annual event
It causes day-night, tides, wind exclusion and ocean currents.	This causes changes in the time of day and night, the difference in the position of the sun at noon and the change in seasons.

2. நியூட்டனின் விதி I,II,IIIஐ அதன் நடைமுறை பயன்பாடுகளுடன் விளக்கவும் மற்றும் நியூட்டனின் ஈர்ப்பு விதியை விவரிக்க.

Explain newton's law I,II,III with give its applications and Describe newton's gravitational law.

Newton's First Law:

- ✓ Every object remains in its state of rest or steady state of motion unless acted upon by an external force. This rule defines the force. Not only that, it also explains the position of objects.

Newton's second law of motion

- ✓ The force acting on an object is inversely proportional to the rate of change of momentum of the object. And this variation of momentum is in the direction of the force. This method helps to measure the numerical value of the force. Hence it can also be called 'Law of force'.
- ✓ The equation for the force can be given as follows.
- ✓ Suppose an object of mass m is in rectilinear motion with an initial velocity u. Under the influence of an unbalanced external force F in a time interval t, its velocity changes to v.

The initial momentum of the object is $P_i = mu$

Final momentum $P_f = mv$

$F = m \times a$

Force = mass x acceleration

Newton's Third Law of Motion:

- ✓ Every force has an equal opposite force. A force and a counterforce always act on two different objects.
- ✓ If an object A exerts a force F_A on an object B, 'B' will exert its opposite force F_B on A. Their numerical value is equal. But they work in opposite direction to each other.

$$F_A = - F_B$$

Some examples:

- ✓ Birds push the air down with the force (force) of their wings. The wind creates a force equal to that force (opposite force) and makes the bird fly up.
- ✓ A swimmer creates force by pushing the water backward with the arm. The water pushes the person forward with an opposite force equal to the force.
- ✓ In firing the projectile, the projectile moves backward after detonation due to the counter force equal to the forward force of the projectile.

Newton's law of general gravitation:

- ✓ Every particle of matter in the universe attracts other particles with a certain force value. The force is directly proportional to the product of their masses and inversely proportional to twice the distance between their centers. And this force acts along the line of contact of the masses.
- ✓ This force is always gravity. This force does not depend on the medium in which the masses are located.
- ✓ Consider two objects of masses m_1 and m_2 placed at a distance r . The gravitational force between them is F , according to the law of general gravitation

$$F \propto m_1 \times m_2$$

$$F \propto 1/ r^2$$

Combine these two

$$F \propto \frac{m_1 \times m_2}{r^2}$$

$$F = \frac{G m_1 m_2}{r^2}$$

G is the gravitational constant. Its value (in SI units) is $6.674 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$

Applications of Newton's Law of Gravitation:

- ✓ The law of general gravitation is used to measure the dimensions of objects in the universe. This method helps in accurate calculation of Earth's mass, radius, acceleration due to gravity etc.
- ✓ It helps to discover new constellations and planets.
- ✓ Sometimes the random movement (Wobble) of constellations affects the movement of nearby planets. This method is used to measure the mass of those stars at that time.
- ✓ Root germination and growth of plants depends on the gravity of the earth is called 'Geogravity'. This method is used to explain this phenomenon.
- ✓ It is used to define the path of materials.

3. உலோகங்கள் மற்றும் அலோகங்களின் இயற்பியல் மற்றும் வேதியியல் பண்புகள் பற்றி எழுதுக.

Write about the Physical and Chemical properties of Metals and Non-Metals.

Metals:

Metals like iron, copper, gold and silver are the metals that we use in our daily life. Properties and

uses of metals are given below.

Physical Properties of Metals:

1. Metals are solid at normal temperature and pressure.
2. Most metals are hard.
3. Generally metals have high density.
4. All metals are shiny. This luster is known as metallic luster.
5. Metals generally have higher melting and boiling points.
6. Metals can be hammered into very thin sheets. This property of metals is known as malleability. It is because of this property that aluminum is used as sheet.
7. Metals can be drawn into thin wire. This property of metals is known as ductility. Example: Copper wires.
8. Metals in general are good conductors of heat and electricity.
9. Metals have the characteristic of making a distinctive sound when tapped. This quality is used to make temple bells.

Non - Metals:

Elements like sulphur, carbon and oxygen are metals. Some of the physical properties and uses of metals are given below.

Physical Properties of Metals:

1. Metals exist in three states solid, liquid and gas at normal temperature. For example, sulfur and phosphorus are found in the solid state and bromine in the liquid state. Oxygen and nitrogen are in gaseous state.
 2. Metals other than diamond are generally non-hard (diamond is a form of carbon).
 3. Metals have a dull appearance.
 4. Metals are normally soft and less dense. Only diamond is denser. Diamond is the hardest material found in nature.
 5. Metals have low melting point and boiling point.
 6. Metals do not have the property of becoming a plate.
 7. Metals are non-conductive. Carbon fibers have the elasticity of a wire.
 8. Metals are generally poor conductors of electricity. Only graphite, a form of carbon, conducts electricity.
 9. Metals do not make sound when tapped.
4. வேதி உரங்கள் மற்றும் பூச்சிக்கொல்லிகளின் தீய விளைவுகள் பற்றி பகுப்பாய்வு செய்ய்க.

Critically examine the ill - effects of chemical Fertilisers and Pesticides.

1. Chemical Fertilizers Used in India According to a report by the Food and Agriculture Organization India is the second largest consumer of fertilizers in the world.
2. On an average, about 500 lakh metric tonnes of fertilizers have been used in India in the last ten years.
3. The use of fertilizers like Urea, NPK, etc. has increased.
4. National average use of fertilizers is about 133 kg per head.
5. States of India that use more fertilizers. States are states like Bihar, Punjab, Haryana, Telangana
6. Bad Effects of Chemical Fertilizers It causes various types of bad effects.

Firstly regarding the environment:

1. Excessive use of fertilizers has a huge impact on the environment.
2. Reduces soil fertility.
3. Reduces productivity.
4. Air pollution occurs.
5. Water pollution occurs.
6. Excessive use of fertilizers increases the emission of greenhouse gases.
7. Reduces the productivity of the crop.

Harms to health:

1. Excessive use of fertilizers causes great harm to human health.
2. Mainly nitrate, nitrite etc. are found in fertilizer.
3. These are harmful to health.

4. Mainly cause serious health problems like cancer and diabetes.
5. Excessive use of fertilizers increases toxicity in crops.
6. When we consume food crops, it can cause long-term effects on our health.

Use of pesticides:

1. India is the second largest producer of pesticides in the world.
2. Among these, the amount of pesticides consumed in India is above average.
3. About 12 percent rate of fungicide is used
4. Herbicide is applied at 10% rate.
5. These cause great damage.

Important impacts:

1. Various health problems are caused by excessive pesticide applications.
2. They can cause long term health problems like cancer.

Environmental impact:

1. The use of too many pesticides affects the living organisms in the environment.
 2. Birds, fish and small insects are mainly affected.
 3. Other plants will be affected.
 4. Pollination will be affected.
 5. Too many pesticides pollute the water.
 6. Excessive use of pesticides affects the soil.
 7. Their productivity will decrease.
 8. Excessive use can cause various types of pollution in the environment.
 9. Air pollution.
 10. Problems like water pollution will occur.
 11. The main problem with these is that they contain various chemicals that can be harmful to health.
 12. In Kasaragod district of Kerala, the insecticide Endo Sulphan was used a few years ago.
 13. It was used for crops like cashew, tea.
 14. As a result, the people living in the place suffered a lot of health problems and the nervous system was affected.
 15. Subsequently, in 2015, the Supreme Court banned the manufacture, sale, storage, export, and manufacture of the insecticide Endosulphan across India.
 16. Pesticides and fertilizers used in this way are not only harmful to the environment but also to the health and agriculture causing various harms such as yield, health problems etc
5. ஐந்து உலக வகைப்பாட்டு முறையை விவரித்து அதன் சாதக பாதகங்களை பட்டியலிடுக.

Explain five kingdom classification and list out its merits and demerits.

1. The five world classification system was proposed by R.H. Whittaker in 1969.
2. These five worlds are classified on the basis of characteristics such as cell structure, mode of nutrition, food source and body structure.

1) World of Monira

1. All prokaryotic organisms belong to the phylum Monira. There is no real substance in these.
2. There is no nuclear membrane and no membrane-enclosed organelles.
3. Majority of bacteria depend on different or other feeding system.
4. Some bacteria are autotrophic. Examples of Monira are bacteria and blue-green algae.

2) World of Protista

1. The Protista world includes unicellular organisms and some simple multicellular eukaryotes.
2. Protists are divided into two main groups.
3. Plant-type protists produce food by photosynthesis
4. Generally these are called algae.
5. Algae include unicellular and multicellular types.
6. Animal-type protists are often called protozoans.

7. Protozoa include animals like Amoeba, Paramecium

3) The world of fungi

1. Fungi are mostly multicellular organisms. Having a eukaryotic cell structure. They obtain the nutrients they need by secreting digestive enzymes on food items and digesting and absorbing them.
2. Fungi can be seen as saplings and decomposers (decomposing fungi) or parasites. Molds, mildews, fungi, and yeasts belong to the fungi kingdom.

4) Plant world

1. The plant world consists of multicellular organisms called eukaryotes. These are photosynthetic.
2. Lipids are also stored foods in the form of oil or fat.
3. Plant cells have specific functions. They perform photosynthesis and transport substances.
4. The plant kingdom includes mosses, ferns, cone-forming plants and flowering plants.

5) Animal world

1. Animals are multicellular organisms with eukaryotic cells. These are organisms with different feeding patterns. Animal cells do not have a cell wall.
2. Most animals in the animal world are mobile.
3. Mammals, including fish, amphibians, reptiles, birds, and man, are vertebrates belonging to the animal kingdom.
4. Also sea sponges, jelly fishes, worms belonging to several groups, starfish and insects are vertebrates belonging to the animal kingdom.

6. உணவு உடம்பம் மற்றும் செரிமான குறைபாடு குறித்து விளக்குக.

Explain nutritional and digestive disorder.

Colitis:

1. Bacterial, viral and parasitic infections easily attack the intestinal tract. This causes inflammation in the inner wall of the colon.
2. This is called colitis.
3. Symptoms include rectal bleeding, abdominal cramps and diarrhoea.

Protein Energy Malnutrition (PEM)

1. Deficiency of protein in diet during adolescence causes protein energy deficiencies like Marasmus and Kwashiorkor.
2. Symptoms include dry skin, pot belly, watery feet and face, stunted growth, fur discoloration, weakness and irritability.
3. This condition appears due to lack of carbohydrate and protein in the diet.

Indigestion:

1. This deficiency occurs due to improper digestion of food.
2. Inadequate secretion of digestive enzymes, palpitations, regurgitation of food, overeating and spicy food causes this condition.

Constipation:

Constipation is caused by poor bowel movement due to lack of physical activity and low fiber diet, and stool stays in the rectum for a long time.

Vomiting:

1. It is a counter-oscilloscope phenomenon.
2. Vomiting is the passage of harmful substances and spoiled food from the stomach through the mouth.
3. Nausea is followed by vomiting.

Jaundice:

1. This condition is caused by liver damage. Thus, the separation of bile pigments from the blood from the degraded hemoglobin is affected.

2. These pigments get deposited in the eyes and skin and give yellow color.

Liver cirrhosis:

1. Liver cirrhosis occurs as long-term liver diseases affect and destroy liver cells.
2. Thus, fibroids appear in abdominal blood vessels and bile ducts.
3. Abandoned liver is also known as (a) scarred liver. This condition is caused by infection, feeding on placenta, malnutrition and alcoholism.

Gall stones:

1. Gallbladder stones appear due to a change in the nature of bile.
2. These stones obstruct cystic duct, hepatic duct and hepato-pancreatic duct causing pain, jaundice, hepatitis and pancreatitis.

Appendicitis:

1. Inflammation of the colon causes severe abdominal pain.
2. Burst of intestine and infection in lower abdomen.

Diaphragmatic hernia:

1. In which the top of the stomach protrudes slightly above the diaphragm.
2. Also due to constant pressure on the abdominal muscles due to coughing, vomiting, high pressure exerted during defecation, heavy lifting, etc., in some people the muscles become weak due to injury or other damage.
3. Irritation caused by stomach acid causes chest irritation.

Diarrhoea:

1. Diarrhea is a worldwide gastrointestinal disorder.
2. It is sometimes caused by a bacterial or viral infection spread through food and water. As the bacteria damage the lining of the colon, the colon is unable to absorb liquids.
3. Dehydration if left untreated.
4. Rehydrate the body by drinking large amounts of water.

Pepticulcer:

1. Anterior duodenal ulcer is most common in people aged 25 to 45 years and gastric ulcer in people over 50 years old.
2. Chronic use of uncontrolled aspirin or anti-inflammatory drugs can cause peptic ulcer. Stomach ulcers can also be caused by smoking, drinking, caffeine use and stress.

Obesity:

1. This condition is caused by accumulation of excess fat in adipose tissue.
2. It can trigger diseases like hypertension, atherosclerotic heart disease and diabetes. Obesity can also occur due to hereditary causes, overeating, endocrine or metabolic disorders.
3. The degree of obesity can be determined using the obesity scale or body mass index (BMI).
4. A normal grown man has a BMI of 19-25. A BMI above 25 is considered obese.

7. தமிழ்நாடு ஆராய்ச்சி மற்றும் மேம்பாட்டுக் கொள்கையை விவரிக்க.

Elucidate Tamil Nadu Research and Development Policy.

1. Industries, Investment Promotion and Trade Sector.
2. Make Tamil Nadu a knowledge-based economy by 2030 with excellence in manufacturing and services.
3. Increase inputs to R&D, including the number of researchers and scientists.
4. Increase outputs of innovation such as patents and publications.
5. Creating an integrated innovation ecosystem of research parks, research centers, centers of excellence,
6. Encourage R&D in the private sector by targeting new indigenous R&D active firms in both.

7. Manufacturing and service sectors, such as GCC, stimulate more R&D investment in R&D by active firms, encouraging firms that have not done R&D yet, and public-private support.
 8. By 2030, double R&D spending from government, higher education and the private sector.
 9. Tamil Nadu's economy will grow to 1 trillion USD by the end of 2030.
 10. Land Expenditure Incentive: For R&D projects Rs. 5 million/acre with 50% of the cost of purchase or lease of land up to 20 acres. It can also be used as repayment after starting the project.
 11. R&D Training Incentive: Residents of Tamil Nadu Rs. 10,000 for 12 months training incentive.
 12. Employees should be engaged in core R&D and possess qualifications in Technology/Science and 7 years of work experience, or Master's degree in Technology/Science and 5 years of work experience, or Ph.D. in Science/Technology.
 13. Quality Certification Incentive: Projects seeking quality certification (ISO, ISI, BIS, FPO, BEE, AGMARK) or any other national/international certifications shall claim subsidy of 50% of the total cost of certification and Rs. 10 million for the duration of the investment.
 14. Intellectual Property Incentive: Reimbursement of 50% of expenditure subject to a maximum of Rs.10 million for internal research and development for intellectual property and for individual R&D assets up to Rs. Can claim up to 5 crores.
 15. Fixed Incentive: Another eligibility for Fixed Incentive is Electricity Tax Exemption for 5 years, Stamp Duty Exemption and Green Industry Incentive of Rs. 10 million.
 16. SGST Refund: R&D project can also claim SGST refund on capital goods.
 17. It will also take projects to develop predictive analytics solutions for Additive Manufacturing (AM) for Industry 4.0.
 18. Metal additive manufacturing, also known as 3D printing, is a scalable manufacturing technology whose adoption is being used at scale across many industries.
8. மனித இதயத்தின் கட்டமைப்பு மற்றும் செயல்பாடுகளை பற்றி குறிப்பு தருக. பல்வேறு இதய நோய்களைப் பற்றி எழுதுக.
Give a detailed account on structure and functions of Human Heart. Write about different Cardiac ailments.
1. The heart is a muscular pumping organ that pushes blood through the blood vessels.
 2. The human heart is found between the lungs, in the thorax, above the diaphragm, slightly tilted to the left.
 3. The heart is made up of a specialized muscle called the cardiac muscle.
 4. The heart is surrounded by a two-layered pericardial membrane.
 5. The pericardial fluid that fills the space of this layer acts as a lubricant to protect against friction and movement injuries during the beating of the heart.
 6. The human heart has four chambers.
 7. Both upper chambers made of smooth muscle are called auricles or atria (singular – atrium) and lower chambers made of thick muscle are called ventricles.
 8. The partition separating these chambers is called 'septum'.
 9. The septum between the atria and ventricles prevents oxygen-rich and oxygen-poor blood from mixing with each other.
 10. The two auricles are separated by the auricular septum.
 11. Left auricle is smaller than right auricle.
 12. The right auricle receives deoxygenated blood from various parts of the body through major veins such as superior aorta, inferior aorta and coronary sinus.
 13. The left auricle receives oxygen-rich blood from the lungs through the pulmonary veins. The right and left atria pump (pump) blood into the right and left ventricles respectively.

14. The lower chambers of the heart are called ventricles.
15. The right and left ventricles are separated by the interventricular septum.
16. The walls of the right and left ventricles are thickened due to the forceful pumping of blood from the heart.

Valves:

Right Atrio Ventricular Valve:

1. It is located between the right atrium and the right ventricles.
2. It is called tricuspid valve because it is made up of three thin petal muscle folds in triangular shape.
3. The leaflet ends of the valve are attached to the papillary muscles of the ventricle by muscular extensions called chordae tendinae.

Left atrioventricular valve:

1. It is located between the left atrium and the left ventricles.
2. It is also known as mitral valve or mitral valve as it is located like two valves.

Semilunar valves:

1. Semilunar valves in major arteries leaving the heart (aorta, pulmonary artery) prevent blood from flowing backward into the ventricle.
2. They are called pulmonary and aortic semilunar valves.

Hypertension:

It is the most common disease among humans. A healthy person's blood pressure is 120/80 mm Hg.

Stroke:

A stroke is caused by the bursting of blood vessels in the brain (cerebral haemorrhage) or the formation of a blood clot (thrombus) or clot in an artery leading to the brain.

Heart failure:

This condition is caused by a defect in the contraction of the heart muscle. In this, the Frank-Starling effect is a downward shift from the normal end-diastolic volume and a rightward shift. A failing heart ejects less volume.

Rheumatoid Heart Disease:

Rheumatic fever is an autoimmune disease.

9. மனித சுவாச அமைப்பு பற்றி விளக்குக.

Explain Human Respiratory System.

1. The human respiratory system consists of nostrils, nostrils, pharynx, trachea, bronchial tubes, bronchioles and lungs with air sacs.
2. The region from the nasal cavity to the terminal bronchiole is the conduction region.
3. Air sacs and vessels called the respiratory tract.
4. Breathing surfaces in the conducting region regulate the air temperature by cooling and heating the inhaled air.
5. Air enters the upper respiratory tract through the nostrils.
6. The air thus entering is filtered by the capillaries in the lining of the respiratory tract.
7. The external nostrils open into the nasopharynx through the nares. This region opens into the trachea through the larynx in the pharyngeal region.
8. Filamentous epithelial cells in the wall of trachea, bronchioles and bronchioles secrete mucus.
9. Goblet cells in the mucous membrane of the airways secrete smooth mucus, which is rich in glycoproteins.

10. Microorganisms and dust particles adhering to the mucous membrane are brought to the top of the trachea and passed into the esophagus during normal swallowing.
11. The thin, elastic laryngeal membrane prevents food particles from entering the vocal folds during swallowing.
12. The trachea consists of several rings of cartilage which are somewhat flexible.
13. It extends from the pharynx to the middle of the thorax and divides into the right and left primary bronchi at the 5th thoracic spine and enters the right and left lungs.
14. Within the lungs the primary bronchi divide several times into secondary and tertiary bronchi.
15. Tertiary bronchioles divide again into terminal bronchioles and respiratory bronchioles.

Characteristics of respiratory tract:

1. Should have more surface area and more blood vessels.
2. Should be very thin walled with moisture.
3. Have direct contact with the environment.
4. Air should be easily permeable during respiration.

Stages according to respiratory phenomenon:

1. Gas exchange between atmosphere and lungs.
2. Exchange of O₂ and CO₂ between lungs and blood.
3. Transport of O₂ and CO₂ through the blood.
4. Gas exchange between blood and cells.
5. Cells take in O₂ and expel CO₂ to perform many physiological functions.

10. 'உயிரியத்தீர்வு' - வரையறுக்க. பல்வேறு உயிரியத்தீர்வு தொழில்நுட்பங்களை உதாரணத்துடன் விவரிக்க.

Define 'Bio-Remediation'. Explain various Bio - Remediation technologies with Example.

1. It is defined as the use of microorganisms or plants to manage environmental pollution.
2. It is an approach used to treat wastes including wastewater, industrial waste and solid waste.
3. Bioremediation process is applied to the removal of oil, petrochemical residues, pesticides or heavy metals from soil or ground water.
4. In many cases, bioremediation is less expensive and more sustainable than other physical and chemical methods of remediation.
5. An eco-friendly approach and can deal with lower concentrations of contaminants more effectively.
6. Use of indigenous microbial population as indicator species for bioremediation process.
7. Bioremediation with the addition of adapted or designed microbial inoculants.
8. Use of plants for bioremediation - green technology.

Some examples of bioremediation technologies are:

1. Phytoremediation - use of plants to bring about remediation of environmental pollutants.
2. Mycoremediation - use of fungi to bring about remediation of environmental pollutants.
3. Bioventing a process that increases the oxygen or air flow to accelerate the degradation of environmental pollutants.
4. Bioleaching use of microorganisms in solution to recover metal pollutants from contaminated sites.
5. Bioaugmentation a addition of selected microbes to speed up degradation process.
6. Composting process by which the solid waste is composted by the use of microbes into manure which acts as a nutrient for plant growth.
7. Rhizofiltration uptake of metals or degradation of organic compounds by rhizosphere microorganisms.
8. Rhizostimulation stimulation of plant growth by the rhizosphere by providing better growth condition or reduction in toxic materials.

11. மனித மரபணுத்தொகை திடம் பற்றிய விரிவான குறிப்பு எழுதுக. அதன் முக்கிய அம்சங்களை பட்டியலிடுக.

Write a detailed note on Human Genome Project. List out its salient features.

1. The international human genome project was launched in the year 1990.
2. It was a mega project and took 13 years to complete.
3. The human genome is about 25 times larger than the genome of any organism sequenced to date and is the first vertebrate genome to be completed.
4. Human genome is said to have approximately 3×10^9 bp. HGP was closely associated with the rapid development of a new area in biology called bioinformatics.
5. Identify all the genes (approximately 30000) in human DNA.
6. Determine the sequence of the three billion chemical base pairs that makeup the human DNA.
7. To store this information in databases.
8. Improve tools for data analysis.
9. Transfer related technologies to other sectors, such as industries.
10. Address the ethical, legal and social issues (ELSI) that may arise from the project.

Salient features of Human Genome Project:

1. Although human genome contains 3 billion nucleotide bases, the DNA sequences that encode proteins make up only about 5% of the genome.
2. An average gene consists of 3000 bases, the largest known human gene being dystrophin with 2.4 million bases.
3. The function of 50% of the genome is derived from transposable elements such as LINE and ALU sequence.
4. Genes are distributed over 24 chromosomes. Chromosome 19 has the highest gene density. Chromosome 13 and Y chromosome have lowest gene densities.
5. The chromosomal organization of human genes shows diversity.
6. There may be 35000-40000 genes in the genome and almost 99.9 nucleotide bases are exactly the same in all people.
7. Functions for over 50 percent of the discovered genes are unknown.
8. Less than 2 percent of the genome codes for proteins.
9. Repeated sequences make up very large portion of the human genome. Repetitive sequences have no direct coding functions but they shed light on chromosome structure, dynamics and evolution (genetic diversity). Chromosome 1 has 2968 genes whereas chromosome 'Y' has 231 genes.

12. தமிழ்நாடு மாநில சுகாதாரக் கொள்கையை பற்றி விளக்குக.

Elucidate Tamil Nadu State Health Policy.

1. Tamil Nadu is known for its impressive achievements in the health sector.
2. A dynamic Public Health system, the State's emphasis on the Primary Health Care and Promotive Health, well trained and skilled human resources
3. Efficient drug distribution system, state of art secondary and tertiary care, unique, innovative and targeted schemes
4. A robust Public Private partnership through the Insurance sector are some of the several reasons which have been attributed as the reasons for the State's success in health care.
5. **Health Administration:** The Director of Medical Education is the administrative Head of the Directorate and is responsible for the administration of the Government Medical Colleges, the tertiary care hospitals and Super Specialty Hospitals attached to the Directorate. The Government Medical Colleges and attached Hospitals are under the administrative control of respective Deans.
6. **Medical Rural and Health Service:** The Directorate renders services through the grid of 18 District Headquarters Hospitals, 205 Taluk Hospitals, 67 Non-Taluk Hospitals, 7 Women and Children

Hospitals, 11 Dispensaries, 2 Tuberculosis Hospitals, 7 Leprosy Hospitals and 1 Rehabilitation Institution cum Hospital.

7. **Family Welfare Program:** Tamil Nadu is considered as a pioneer state in implementing the Family Welfare Programme in the country.
8. Tamil Nadu has been maintaining the total fertility rate below the replacement level of 2.1 in the past two decades. Hence, the census operation projection 2019 reveals that Tamil Nadu will attain the population stabilization in the phase during the years 2031 - 2035.
9. **Food Safety:** The quality of food is tested at the six Food Analytical Laboratories in Tamil Nadu. They are located at Chennai, Thanjavur, Madurai, Tirunelveli, Salem and Coimbatore. Licensing and Registration has been initiated through online in all districts. As per the Food Safety and Standard Act.
10. **Drug Control Administration:** The Director of Drugs Control is the controlling authority and Licencing Authority for grant of licences for manufacturing of certain allopathic drugs, Medical devices.
11. He is also the Licencing Authority for the Blood Centres (Blood Banks) and also for certain Categories of Allopathic Drugs along with the Central License Approving Authority of the Government of India.
12. **Medical Services Recruitment Board:** It was constituted exclusively for the Health and Family Welfare Department with the objective of recruiting the right candidates to fill up vacancies in various categories of posts of the Health Department.
13. The Health and Family Welfare Department is pivotal in maintaining the good health of the people of the State through Directorates functioning under its control. More than 200 categories of posts in Government Medical Institutions with nearly one lakh Medical and Para Medical staff exist in the Department in these directorates.
14. **Makkalai Thedi Maruthuvam (MTM):** This scheme is conceptualised in such a way that a field level team would provide home based health care services for line-listed beneficiaries such as delivery of HT/DM drugs for patients who are 45 years and above and those with restricted mobility.
15. Home based Palliative Care and Physiotherapy services, caring for End Stage Kidney Failure patients, referral for Essential Services, identification of children with congenital problems or any other health needs in the family which needs to be informed and followed up.
16. **Kalaignarin Varumun Kappom Thittam:** Under the scheme, Specialty Medical Camps are conducted at the rate of 3 camps per rural blocks annually in all 385 rural blocks, which brings a total of 1,155 camps in rural areas.
17. In urban areas, camps are conducted at the rate of 4 camps per Corporation in all 20 Corporations and 15 camps in Greater Chennai Corporation. Totally 1,250 camps will be conducted in a year.
18. **The Tamil Nadu Medical Service Corporation (TNMSC):** The Corporation was set up to reform and restructure the activities related to procuring drugs and other medical supplies effectively through a centralized system for the first time in India.
19. Its main mandate was to procure and supply quality medicines to patients accessing public health facilities without any interruption.

13. முக்கிய தொற்றாத நோய்கள் மற்றும் அதன் தாக்கத்தை பற்றி விளக்குக.

Explain the Major Non Communicable Diseases and its impact.

1. Non-communicable diseases (NCDs) are mostly chronic diseases such as cardiovascular diseases, cancers, and diabetes.
2. Non-infectious diseases are non-communicable diseases with a range of causes. Genetics, a lack of nutrition, the person's age, sex, and other factors are some of the causes of non-infectious diseases.

Major NCDs:

1. **Cardiovascular diseases:** (heart disease and stroke)CVDs are a group of disorders of the heart and blood vessels and include coronary heart disease, cerebrovascular disease, rheumatic heart disease and other conditions
2. The most important behavioural risk factors of heart disease and stroke are unhealthy diet, physical inactivity, tobacco use and alcohol consumption.

Cancer:

Cancer is a serious disease in which the cells start dividing abnormally in an uncontrolled manner.

Causes:

1. Genetics
2. Tobacco and other related narcotics
3. Alcohol
4. Exposure to unnatural radiation (such as UV rays) for an extended period of time
5. Diet and lifestyle
6. Exposure to certain chemicals for a long time
7. Unhealthy environment

Diabetes:

1. Diabetes is a metabolic disease or a condition in which the glucose levels in the blood will be high over a prolonged period of time
2. Blood sugar levels are controlled by a hormone called insulin

Causes:

Diabetes is either caused due to the insufficient production of insulin by the pancreas or it may occur if the cells of the body are not effectively responding to the insulin produced.

Chronic respiratory disease:

1. Chronic respiratory diseases (CRDs) affect the airways and other structures of the lungs
2. Some of the most common are chronic obstructive pulmonary disease (COPD), asthma, occupational lung diseases and pulmonary hypertension

Causes:

1. Tobacco smoke,
2. Air pollution
3. Occupational chemicals and dusts,
4. Frequent lower respiratory infections during childhood. CRDs are not curable;

Impact of NCD:

1. NCDs threaten progress towards the 2030 Agenda for Sustainable Development,
2. Poverty is closely linked with NCDs.
3. The rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries,
4. Particularly by increasing household costs associated with health care.

5. Vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions,
6. In low-resource settings, health-care costs for NCDs quickly drain household resources.
7. The exorbitant costs of NCDs, including treatment, which is often lengthy and expensive, combined with loss of income, force millions of people into poverty annually and stifle development.

14. சுற்றுச்சூழல் அமைப்பின் தன்மை, கட்டமைப்பு மற்றும் செயல்பாடுகள் பற்றிய விரிவான குறிப்பு தருக.

Give a detailed account on nature, structure, and functions of the Ecosystem.

1. An ecosystem is a structural and functional unit of ecology where the living organisms interact with each other and the surrounding environment
2. It is a chain of interactions between organisms and their environment
3. The structure of an ecosystem
4. Biotic Components
5. Abiotic Components

Biotic Components of Ecosystem:

1. The living components of an ecosystem are called the biotic components.
2. Some of these factors include plants, animals, as well as fungi and bacteria.
3. These biotic components can be further classified,
4. Producers
5. Consumers
6. Decomposer
7. Producers are the plants in the ecosystem,
8. Generate their own energy requirement through photosynthesis, in the presence of sunlight and chlorophyll
9. All other living beings are dependent on plants for their energy requirement of food as well as oxygen.

Consumers:

1. Herbivores
2. Carnivores
3. Omnivores.
4. The herbivores are the living organisms that feed on plants
5. Carnivores eat other living organisms.
6. Omnivores are animals that can eat both plant and animal tissue.
7. Decomposers
8. Fungi
9. Bacteria which are the saprophytes
10. They feed on the decaying organic matter and convert this matter into nitrogen and carbon dioxide.
11. The saprophytes play a vital role in recycling the nutrients so that the producers i.e. plants can use them once again.

Abiotic Components of Ecosystem:

1. Abiotic components are the physical and/or the chemical factors that act on the living organisms at any part of their life. These are also called as the ecological factors
2. The physical and chemical factors are characteristic of the environment.

1. Light
2. Air
3. Soil
4. Nutrients
3. The abiotic factors vary from ecosystem to ecosystem
4. In an aquatic ecosystem, the abiotic factors
 1. Water
 2. pH
 3. Sunlight
 4. Turbidity,
 5. Water depth
 6. Salinity
 7. Available nutrients
 8. Dissolved oxygen.
5. Abiotic factors in terrestrial ecosystems
 1. Soil
 2. Soil types
 3. Temperature
 4. Rain
 5. Altitude
 6. Wind
 7. Nutrients
 8. Sunlight
6. The sun is the energy source.
7. Producers/plants use this energy to synthesize food in the presence of carbon dioxide and chlorophyll.
8. The energy from the sun, through several chemical reactions, turns into chemical energy.
9. The herbivores are dependent on plants for the energy requirements.
10. The carnivores feed on the herbivores and other carnivores
11. Microbes then decompose any dead and decaying organic matter.
12. Decomposers, after various chemical reactions, release molecules back to the environment in the form of chemicals.
13. The chemicals are again used by the producers, and the cycle starts again.

Functions:

1. Flow of energy
 2. The cycling of nutrients
 3. It maintains a balance among the various trophic levels in the ecosystem.
 4. It cycles the minerals through the biosphere.
15. இந்தியா மற்றும் தமிழ்நாட்டின் அழிந்து வரும் மற்றும் உள்ளூர் இனங்களை பட்டியலிடுக.

List out endangered and Endemic Species of India and Tamil Nadu.

1. Endangered species, any species that is at risk of extinction because of a sudden rapid decrease in its population or a loss of its critical habitat.
2. Endemic species are plant and animal species that are found in a particular geographical region

3. The International Union for Conservation of Nature (IUCN) Red List of Threatened Species
4. Also known as the IUCN Red List or Red Data Book, founded in 1964,
5. It is the world's most comprehensive inventory of the global conservation status of biological species.

Endangered species:

1. Bengal Tiger Bengal tigers account for about half of the world's total tiger population, 70% of which can be found living in India.
2. Asiatic Lion Entire population can only be found in India and restricted to the Gir National Park and environs in Gujarat
3. Snow Leopard They can only be found in Ladakh, Himachal Pradesh, Uttarakhand and the western and eastern parts of the Himalayas,
4. One-horned Rhinoceros Northeastern India and the Terai grasslands of Nepal
5. Blackbuck most endangered species in India.
6. Lion-tailed Macaque Western Ghats of South India,
7. Resplendent Tree Frog in Dachigam National Park
8. Nilgiri Tahr species only has about 2,500-3,000 individuals remaining in the wild States of Kerala and Tamil Nadu
9. Indian Bison (Gaur)
10. Endemic species
11. Asiatic Lion, Gir Forest
12. Kashmir Stag, Kashmir Valley
13. Lion-Tailed Macaque, Western Ghats
14. Purple Frog, Western Ghats
15. Nilgiri Tahr, Nilgiri Hills
16. Sangai Deer, Loktak Lake
17. Malabar Civet
18. Nilgiri Blue Robin
19. Namdapha Flying Squirrel
20. Bronzeback Vine Snake
21. Pygmy Hog-Assam
22. Indian Rhinoceros

Endemic Species Flora:

1. Sapria Himalayan is a rare and interesting root parasite plant that is endemic to northeastern India.
 2. Nepenthes Khasianais a carnivorous plant endemic to the Khasi Hills of Meghalaya.
16. **ஆர்.டி.ஓ.வின் வளர்ச்சி, பார்வை, பணி, சாதனை மற்றும் அதன் முக்கியத்துவம் குறித்து விரிவாக குறிப்பெழுதுக.**

Write a detailed note on Growth, Vision, Mission, Achievement and Significant of DRDO.

1. The Defence Research and Development Organisation (DRDO) is the premier agency in india
2. Under the Department of Defence Research and Development in Ministry of Defence of the Government of India,
3. Charged with the military's research and development, headquartered in Delhi, India.
4. It was formed in 1958 by the merger of the Technical Development Establishment and the Directorate of Technical Development and Production of the Indian Ordnance Factories with the Defence Science Organisation.

Vision and mission:

1. Empowering the nation with state-of-the-art indigenous Defence technologies and systems.
2. Design, develop and lead to production state-of-the-art sensors, weapon systems, platforms and allied equipment for our Defence Services.
3. Provide technological solutions to the Services to optimise combat effectiveness and to promote well-being of the troops.
4. Develop infrastructure and committed quality manpower and build strong indigenous technology base

Functions:

1. To advise on the matters of National Security in terms of upcoming progress in science and tech.
2. DRDO also designs and executes programs related to scientific research, development, design, and evaluation in fields incorporated under national security.
3. Administration of laboratories, ranges, facilities, agencies, establishments, and projects
4. DRDO is responsible for overlooking financial matters and other related assistance to institutions, individuals, and universities for the training and study of human resources on components of science and technology that affect national security.
5. Consult and cooperate with the Ministry of External Affairs in international relations related to science and technology affecting national security.
6. DRDO certifies the design airworthiness of military equipment and aircraft
7. Empowering the nation with state-of-the-art indigenous Defence technologies and systems
8. DRDO is a network of more than 50 laboratories
9. Labs like aeronautics, armaments, electronics, combat vehicles, engineering systems etc.

Various Programmes of DRDO:

1. Integrated Guided-Missile Development Programme (IGMDP)
2. Major works to make Indian defence forces self-sufficient in the field of missile technology.
3. The missiles developed under IGMDP are: Prithvi, Agni, Trishul, Akash, and Nag.
4. **Mobile Autonomous Robot System**
5. MARS is a smart robust robot to handle land mines and Inert Explosive Devices (IEDs) which helps the Indian Armed Forces to disarm them from far distances despite hostile surroundings.
6. With some add-ons, this system can even be used to dig the ground for the object and defuse the Improvised Explosive Device by various methods.
7. **Highest Terrestrial Centre in Ladakh**
8. DRDO's centre in Ladakh
9. 17,600 feet above sea level at Changla near Pangong lake
10. To serve as a natural cold storage unit for the preservation of natural and medicinal plants.

17. நானோ தொழில்நுட்பம் என்றால் என்ன? பல்வேறு துறைகளில் அதன் பயன்பாடு குறித்து விளக்குக.

What is Nano Technology? Explain its application in various fields.

1. Nanotechnology or nanotech in short is the technology that involves the manipulation of matter on atomic, molecular, and supramolecular scales
2. 1 to 100 nanometers.
3. One nanometer (nm) is one-billionth or (10⁻⁹) of a meter.
4. Use of materials and devices so tiny that nothing can be built any smaller.

Applications of Nanotechnology:

1. Electronics

2. **Nano-RAM:** It is a non-volatile RAM (Random Access Memory) based on carbon nanotubes deposited on a chip-like substrate with a small size that permits very high-density memories.
 3. Nano Optomechanical S-RAM (Static RAM)
 4. Faster read/write time, compared to a MEMS memory, and the processes take place without interference which further reduces time compared to a traditional electrical enabled SRAM.
 5. Healthcare and Medicine
 6. Nanotech detector- to detect heart attack
 7. Nanochips to check plaque in arteries
 8. Nanocarriers for eye surgery, chemotherapy, etc.
 9. NanoFlares – used for detection of cancer cells in the bloodstream
 10. Nanopores – used in making DNA sequencing more efficient.
 11. Diabetic pads for regulating blood sugar levels
 12. Nanoparticles for drug delivery to the brain
 13. Nanosponges – are polymer nanoparticles coated with a red blood cell membrane.
 14. They can be used for absorbing toxins and removing them from the bloodstream.
 15. Energy -Solar/photovoltaic paints – potential to replace solar panels.
 16. Painted surface will capture energy from the sun and transform it into electricity.
 17. Wind power generations – nanogenerators – are flexible thin sheets that, when bent, can generate potential power.
 18. Nanobatteries – enable rechargeable lithium-ion batteries to last longer.
 19. Nanotechnology in Agriculture and Food
 20. Nano fertilizers
 21. Hybrid polymers are used in packaging and to reduce spoilage
 22. Sensors for food-borne pathogens
 23. Nano-emulsions – to reduce bacteria in produce
 24. Nanoparticles based on titanium dioxide – used as antimicrobial agents
18. ஸ்டாப்ஸ் விளைவு என்றால் என்ன? அதன் பயன்பாடுகள் யாவை?

What is Doppler Effect? and what are its applications?

- 1) A fast moving train will appear to increase in pitch as it approaches a listener at rest and decrease in pitch as it moves away from the listener.
- 2) The appearance change at this frequency was first discovered and explained by the Austrian mathematician and physicist Christian Doppler (1803 - 1853).
- 3) He found that there is a difference between the frequency of the sound heard by the listener and the frequency of the sound source when there is relativity between the listener and the sound source. This is the Doppler effect. This relativity can be of the following types.
- 4) Moving the listener towards or away from a fixed sound source
- 5) Sound source moving towards or away from a stationary listener.
- 6) Movement of sound source and listener towards or away from each other.
- 7) Movement of the medium through which the sound propagates while the sound source and the listener are at rest.
- 8) For simplicity of calculations we will assume that the sound propagation medium is at rest. Hence the velocity of the medium is vorticity.
- 9) Let S and listener L move with velocity V_S and V_L respectively through the sound. Let us assume that the sound source and the listener are moving towards each other. As the distance between the

sound source and the listener decreases, the apparent frequency becomes higher than the actual frequency.

10) Let the frequency of the sound source be 'n' and the frequency of the sound perceived by the listener be n'. Then the equation for the appearance frequency n' is

$$n' = \left(\frac{v + v_L}{v - v_s} \right) n$$

Where V is the velocity of sound in the specified medium. We will now look at the equations for the various potential components of the sound medium and the listener's movements.

Equations for appearance frequency due to Doppler Effect

Position	Sound Source And Listener Position	Reference	Appearance Frequency
1	The sound source and listener are on. moving towards each other.	A. The distance between the light source and the receiver decreases. b. The apparent frequency is greater than the true frequency.	$n' = \left(\frac{v + v_L}{v - v_s} \right) n$
2	The sound source and listener are on. The sound source and listener move away from each other.	A. The distance between the sound source and the listener increases. b. The apparent frequency is lower than the true frequency. c. VS and VL values will be in the opposite direction as stated in step 3.	$n' = \left(\frac{v - v_L}{v + v_s} \right) n$
3	The sound source and listener are on. They move one after the other. Follows the listener through sound.	A. The apparent frequency depends on the speed of the sound and the direction of the listener. b. VS is the opposite of what was said in stage 2.	$n' = \left(\frac{v - v_L}{v - v_s} \right) n$
4	The sound source and listener are on. They move one after the other. The listener follows the sound source.	A. The apparent frequency depends on the sound source and the velocity of the listener. b. VS and VL will be in the opposite direction as stated in step 3.	$n' = \left(\frac{v + v_L}{v + v_s} \right) n$
5	At rest by sound. The listener moves towards the sound source.	A. The distance between the sound source and the listener decreases. b. The apparent frequency is greater than the true-frequency. c. At stage 1, VS = 0	$n' = \left(\frac{v + v_L}{v} \right) n$
6	At rest by sound. The listener moves away from the sound source.	A. The distance between the sound source and the listener increases. b. The apparent frequency falls below the true frequency. c. In stage 2, VS = 0	$n' = \left(\frac{v - v_L}{v} \right) n$
7	The listener is at rest. Moving towards the listener through sound.	A. The distance between the sound source and the listener decreases. b. The apparent frequency is greater	$n' = \left(\frac{v}{v - v_s} \right) n$

		than the true frequency. c. In stage 1, VL = 0	
8	The listener is at rest. Sound moves away from the listener.	A. The distance between the sound source and the listener increases. b. The apparent frequency is lower than the true frequency c. In stage 2, VL = 0	$n' = \left(\frac{v}{v + v_s} \right) n$

Let the medium of sound propagation (air) move with velocity W in the direction of propagation of sound. In this event the velocity of sound 'v' becomes (V+W). Similarly, if the medium moves in the opposite direction to the direction of sound, the velocity of sound 'V' becomes (V - W).

Conditions for the Doppler effect not to occur

- 1) In the following circumstances the Doppler effect does not occur and the apparent frequency heard by the listener is equal to the frequency of the sound source.
- 2) When both the sound source (S) and the listener (L) are at rest.
- 3) When the sound medium (S) and the listener (L) move at equal intervals.
- 4) When sound medium (S) and listener (L) move perpendicular to each other.
- 5) The sound source is located at the center of the circle and the listener moves along the circle.

Applications of Doppler effect

A. Measuring the speed of a vehicle

A device mounted on a policeman's car emits an electromagnetic wave, which bounces off a speeding vehicle on the road. A change in the frequency of the reflected wave occurs. The change in that frequency can be used to detect the speed of the vehicle. It helps in tracking high speed vehicles.

B. Calculating the distance of a satellite

As a satellite moves farther away from Earth, the frequency of the radio waves it emits decreases. The change in that frequency can be used to determine the location of the satellite.

C. RADAR (Radio Detection and Ranging)

Radar sends high frequency radio waves towards the aircraft. The speed of the aircraft can be calculated by the difference in frequency of the echoing radio waves detected by the receiver at the radar station.

D. Sonar (SONAR - Sound Navigation and Ranging)

Sonar can detect marine life and submarines by using the frequency difference between transmitted and reflected rays in water.

19. பின்வரும் வினாக்களுக்கு விடையளி.

Answer the following questions.

(i) வெப்ப கட்டுப்படுத்தி செயல்படும் விதத்தை குறிப்பிடுக.

State the working principle of temperature controller.

A device used to keep the temperature of an object or place constant is a thermostat. The word 'thermostat' is derived from two Greek words. In this, the word 'thermo' means heat and the word 'stat' means being in the same state. They are used in heating or cooling equipment to achieve a specified temperature level. These enable or disable the equipment once it reaches a certain temperature. Heating in buildings, central heating of rooms, air conditioners, water heaters and refrigerators in kitchens, microwave ovens are used as heat controllers. A thermostat sometimes acts as a sensor and a controller that controls temperature settings.

(ii) வெப்ப பரிமாற்றம் இல்லா நிகழ்வு மூலம் வெப்பநிலையை அதிகரிக்க முடியுமா?

Can the temperature be increased by a phenomenon without heat transfer?

1. In this case no heat goes into or out of the system ($Q=0$). But the gas expands using its internal energy or the gas compresses due to external work. Therefore, the pressure, volume and temperature of the system can change in case of no heat transfer.
2. First law of thermodynamics for a heatless phenomenon can be written as $\Delta U = -W$. From this we know that work is done on the gas using its internal energy or work is done on the gas and its internal energy increases.
3. A non-thermal process can be performed using the following methods.
4. The system should be thermally insulated so that the system does not transmit heat energy to the environment or any heat energy from the environment does not enter the system.
5. For example, a gas in an insulated cylinder compresses nonthermally or expands nonthermally.
6. A non-heat transfer event occurs in a very short time so that heat cannot be transferred to the environment without any insulation.

Examples:

1. When a tire explodes, the air inside the tire expands rapidly without time to transfer heat to the environment
2. When a gas compresses or expands too rapidly at zero temperature, the gas cannot transfer heat to the environment.
3. Warm air from the surface rises and expands without heat transfer. As a result the water vapor cools and condenses into water droplets and then rain clouds.

(iii) மண்பானையை குளிர்சாதன பெட்டியாக (Refrigerator) கருதலாமா.

Can earthen pot be considered as refrigerator?

1. In summer we use earthen pot water for drinking. A clay pot lowers the temperature of the water poured into it.
2. Inconceivable. Because cyclic process is the most important requirement for heat engine or refrigerator. The cooling process in the crucible is not a cyclic process. The water inside is cooled as water molecules escape from the fine pores in the pot wall. After the water molecules escape through the pore to the environment, they do not reenter the soil. Although heat in the pot is transferred from the cold water to the outside atmosphere, this does not violate the second law of thermodynamics. Because the entropy of the pot (water + outside atmosphere) always increases if we consider it as a thermodynamic system.

20. நிறமாலையின் வகைகளை, வெளியிடு - உட்கவர் அடிப்படையில் வகைப்படுத்தி விவரிக்க.

Describe and classify the types of emission spectrum, based on its coverage.

The emission spectrum of a chemical element or chemical compound is the spectrum of frequencies of electromagnetic radiation emitted when an atom or molecule changes from a higher energy state to a lower energy state.

Atomic Spectrum:

- 1) When a ray of white light falls on a prism, we observe that it experiences refraction twice.
- 2) Once it travels from a rarer medium (air) to a denser medium (glass) and again from a denser medium (glass) to a rarer medium (air).
- 3) Finally, we observe a band of colors, called the spectrum, formed from a ray of white light.
- 4) If we look more closely at this spectrum, the shorter wavelengths of color are more deviated and vice versa.

- 5) Hence, a spectrum of colors is seen from red to violet, where red has the longest wavelength and experiences the least deviation.
- 6) This type of spectrum is called a continuous spectrum because violet merges into blue, blue into green, and so on.
- 7) However, the emission spectrum of atoms in the gas phase does not exhibit a continuous distribution of wavelengths from one color to another.
- 8) In contrast, the emitted light has a specific wavelength with dark spaces between them. Such spectra are called atomic spectra or line spectra

Absorption Spectrum:

- 1) Unlike an emission spectrum, an absorption spectrum is like the photo negative of an emission spectrum.
- 2) In order to observe the absorption spectrum, electromagnetic radiation is bombarded on a sample that absorbs radiation of certain wavelengths.
- 3) The wavelength of radiation absorbed by the material contributes to the missing wavelength, which leaves dark gaps in the bright continuous spectrum. Each element has its own unique line emission spectrum.
- 4) The study of emission spectrum or absorption spectrum is called spectroscopy.

Hydrogen emission spectrum

- 1) The hydrogen spectrum is the main evidence that shows that the electronic structure of the atom is being measured.
- 2) When an electric discharge is passed through a gaseous hydrogen molecule, the hydrogen atoms in the molecule split apart.
- 3) It leads to emission of electromagnetic radiation by energetically excited hydrogen atoms.
- 4) Hydrogen emission spectrum consists of radiations of distinct frequencies. These series of radiations are named after the scientists who discovered them.

21. தமிழ்நாடு மின் கல வாகனக் கொள்கை 2019 ன் முக்கிய சாராம்சங்களை வரிசைப்படுத்துக.

List out the salient features of Tamil Nadu electric vehicle policy 2019.

1. The policy will support and attract investments of Rs 50,000 crore for EV manufacturing and also ensure creation of 1.5 lakh new jobs.
2. Proposed 100% road tax exemption for private and commercial electric vehicles till the end of 2022 for all EVs like two-wheelers and three-wheelers, cars, buses and commercial vehicles.
3. Special incentives will be given to manufacturers of EVs and their components who have invested at least Rs.50 crore, which will create at least 50 jobs.
4. 100% refund of State GST (SGST) on electric vehicles manufactured and sold in Tamil Nadu till 2030.
5. 15% and 20% capital subsidy for investments in EV manufacturing and battery manufacturing till 2025 respectively.
6. Dedicated EV parks in major auto manufacturing hubs.
7. 15% subsidy on cost of land/property for electric vehicle or component manufacturing project in State Industrial Parks. For projects launched in southern districts, investors will get 50% subsidy till 2022.
8. 100% exemption from stamp duty on purchase of land for establishing EV and EV part units.
9. 100% exemption from electricity tax for EV or component manufacturing units set up in Tamil Nadu.
10. Infrastructure projects can be financed either by the government on its own or through a public-private partnership.
11. Certain changes in laws/regulations of building and construction for integrated charging infrastructure at planning stage.
12. In tax concessions, 100 percent refund of State GST (SGST) to manufacturing companies on sales up

to December 31, 2030, up to 100 percent of eligible investment.

13. The registration number shall be displayed in yellow color on green background for transport vehicles and white color on green background for all other EVs to differentiate electric vehicles from other vehicles.
 14. EV related and charging infrastructure generating units will be exempted from 100% electricity tax till December 2025.
 15. 100% stamp duty exemption for transactions till December 2022 for units acquiring property by way of sale or lease.
 16. Units acquiring assets from SIPCOT, SIDCO or other government agencies will get 15% subsidy on cost and 50% subsidy if investing in southern districts.
 17. Employment incentives will be provided to units in the form of reimbursement of employer's contribution to EPFO for all new jobs created till December 2025.
 18. Government to provide 20% higher capital subsidy on eligible investment over 20 years in manufacturing EV batteries.
 20. Building and Construction Acts will be amended to ensure that charging infrastructure is integrated at the planning stage for all new constructions and apartments in cities.
 21. Emphasis is placed on research and development (R&D) related to EV.
 22. EV – Batteries are structures suitable for recycling.
22. இந்தியாவின் புதுப்பிக்கத்தக்க எரிசக்தி சாத்தியங்களைப் பற்றி விவாதிக்கவும்.

Discuss Renewable Energy potentials of India.

The world's third largest consumer of electricity. The country has the third largest renewable energy production capacity. About 40% of India's total electricity needs are derived from renewable energy.

1) Hydropower

1. Hydropower is derived from flowing water. This electricity is considered as clean and economically important electrical energy. Hydropower meets 7 percent of global electricity demand. As it is derived from renewable resources, it has low production cost as compared to other electricity sources. It is capable of increasing or decreasing production instantly as per demand.
2. India is a very good country with very high potential for hydropower generation.
3. It is unevenly distributed in India. Assam, Arunachal Pradesh, Manipur, Nagaland and Tripura states account for 30.4 percent of the country's total hydroelectric potential, eastward-flowing rivers of the peninsula account for 20.9 percent, westward-flowing rivers originating in the Western Ghats (south of Tapi) account for 10.5 percent, and the Ganga basin accounts for 11.7 percent. The Indus drainage area has 16 percent potential and Central Indian rivers have 10.5 percent hydropower potential.

2) Solar Energy/Shakti

1. Solar energy is the conversion of sunlight into electricity by direct, concentrated or concentrated solar energy. In the concentrating method, sunlight from a large area is concentrated into a small beam by means of bows or mirrors onto a cell. Transducers convert sunlight into electricity through the photoelectric effect.
2. Power distribution, marketing, supply of various types of thermal energy required by homes, institutions and industries are the major multi-purposes of solar thermal power project. It is being implemented by the Ministry of Non-Conventional Energy Resources (MNES). Solar energy is used for water boilers, refrigerators, dryers, street lights, cooking, irrigation, power generation, compressors, beauty salons, etc. States like Andhra Pradesh, Gujarat, Rajasthan, Maharashtra and Madhya Pradesh generate large amount of electricity from solar.

3) Wind power:

1. Energy generated by wind or thrust is converted into electrical energy with the help of wind turbines and wind power is obtained. It is a cheap and renewable energy resource. Wind power is used to raise water and propel ships. Wind power is a resource that is highly available, renewable, ubiquitous, clean, and does not emit global warming gases. Less space is enough to install a wind turbine.
2. Wind power generation in India started to develop in 1986 with 55 kW wind turbines installed at coastal Oga in Gujarat, Ratnagiri in coastal Maharashtra and Thoothukudi in coastal Tamil Nadu. Its production capacity has increased significantly over the past few years. India has the fourth highest wind capacity in the world, and offshore wind energy policy has been formulated.

4) Bioenergy:

Bioenergy is derived from organic wastes such as animal waste, cooking waste, air waste, agricultural waste and municipal waste. It is a clean and cheap energy resource. India has 18 GW bioenergy generation capacity. Currently 32% of the total energy consumption in India is derived from biomass. Bioenergy is mostly used for domestic purposes.

5) Recitation and wave power:

1. Electricity is derived from two resources namely ocean currents and ocean waves. India is estimated to have 8000 - 9000 MW of wind power generation potential. With 7000 MW of wind power generation capacity, the Gulf of Cambay is an ideal location for wind power generation. Next to these are the Gulf of Kutch region (1000 MW) and the Sundarbans region (100 MW) as other regions with significant potential. At present Odashakti with a generating capacity of 900 MW is proposed for installation in the Gulf of Kutch region.
2. The offshore power potential of India is estimated at 4000 OMW. A wave power plant with a generating capacity of 150 KW has been installed at Villincham near Thiruvananthapuram. Another similar plant has been set up near the Andaman and Nicobar Islands.
3. Also by 2050 around (500 GW) of electricity has been formulated to be sourced from renewable energy.



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UNIT-II-(Question & Answer)

6 MARKS = 6 to 7 POINTS
12 MARKS = 12 to 14 POINTS
15 MARKS = 15 to 17 POINTS

- ✓ எளிமையான வாக்கிய அமைப்பு தேவை
- ✓ நீளமான வாக்கிய அமைப்பை தவிர்க்க வேண்டும்.
- ✓ விடைத்தாளில் கொடுக்கப்பட்ட இடைவெளிக்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ தனித்துவமான விடையை எழுதுவதற்கு பயிற்சி செய்யவும்.
- ✓ கால மேலாண்மையை கருத்தில் கொள்ளவும் 3 மணி நேரத்திற்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ SCERT பாட புத்தகங்களுக்கு அதிக முக்கியத்துவம் கொடுக்கவும், தேவை ஏற்படின் பிற பாட புத்தகங்களையும் பார்க்கவும்.
- ✓ முதன்மை தேர்வு தொடர்பான TNPSC அறிவுறுத்தல்களை கருத்தில் கொள்ளவும்.

(6 MARKS)

1. ஆளுநர் மற்றும் குடியரசுத் தலைவரின் செயல் அதிகாரத்தை வேறுபடுத்தி காட்டுக.

Differentiate Executive power of Governor and President.

	President	Governor
Method of selection	Indirect election	Method of appointment
Authority to make arbitrary decisions	Limited jurisdiction compared to the Governor	Greater jurisdiction compared to the President
Power to pardon	Death Penalty, Martial Law	No
Department of Foreign Affairs	have	No
The magnitude of the emergency	have	No
Appointed Member	Rajya Sabha-12	Legislative Council-1/6
Declaration of war	have	No

2. தலைமைச் செயலாளரின் அதிகாரங்கள் மற்றும் செயல்பாடுகளை விளக்கவும்.

Elucidate the powers and functions of Chief Secretary.

- ✓ The powers and functions of the Chief Secretary are specified in the 'Rules of Service' framed by a State Government. He derives some of his powers and functions from traditions. These are explained below.
- ✓ Adviser to the Chief Minister
- ✓ Secretary to Cabinet
- ✓ Head of Civil Service
- ✓ Chief Coordinator
- ✓ Head of some departments

✓ Crisis manager

3. ஏதேனும் இரண்டிற்கு விடை அளிக்க. Attempt any two:

(1) IBPS

1. Inception -1975.
2. OBJECTIVE -Employee Selection Agency for Nationalized and Rural Banks.
3. It functions under the Union Ministry.

(2) TNUSRB

1. Tamil Nadu Uniformed Service Recruitment Board.
2. Commencement -1991.
3. Scope- It is an examination agency functioning under the Government of Tamil Nadu.
4. A system to conduct examinations for Assistant Inspector and Secondary Constable.
5. Also agency to recruit Technical Assistants in Police.

(3) NTA

1. Year 2017.
2. It is an examination agency functioning under the Government of India.
3. A functional body under the Central Government has been created as a single body for conducting entrance examinations for various colleges and universities conducted in India.
4. These are the main exams conducted- NEET.

4. அக்னிபாத் திட்டம் பற்றி குறிப்பு எழுதுக.

Write about the Agnipath scheme.

1. Commencement: June 2022
2. Purpose: Employed in various Defence Departments of Government of India.
3. That means the Indian Army, Navy and Air Force will be recruited to the vacant posts.
4. They are also called Agni warriors.
5. The persons elected shall hold office for four years.
6. The age limit for this is 17.5 years to 23 years.
7. The main objective of the program is to make them better soldiers in future.
8. Employment Generation.

5. மாநில பணியாளர் தேர்வாணையத்தின் தோற்றத்தைக் கண்டறிக.

Trace the origin of state public service commission.

1. The first Civil Service Commission in India before independence was formed in Madras Province.
2. The Staff Selection Board was formed in 1924 during the Justice Party regime.
3. Subsequently in 1929 it was renamed as Madras Public Service Commission.
4. According to the Government of India Act 1935 separate Staff Selection Commissions were created for federal and provincial.
5. It was created as a constitutional body after the Constitution of India came into force.
6. Part 14, of Article 315 to 323 of the Constitution states in this regard.
7. It is considered as a premier body for selection of employees for the State Govt.

6. TNPSC -ன் அரசியலமைப்பு பாதுகாப்பு பற்றி விவரி.

Describe the constitutional protection of TNPSC.

1. The Tamil Nadu Government Public Service Commission is defined in Article 315 to 323 of the Constitution of India, Part 14.
2. Articles of the Constitution Article 315 deals with the structure of Public Service Commission.
3. Article 316 Regarding freezing of members.
4. Section 317 deals with the suspension and removal of members of the Staff Selection Commission.

5. Section 318 deals with the terms of reference of the Staff Selection Commission
6. Section 319 prohibits the members of the Selection Board from holding other offices.
7. Section 320 deals with the functions of the Selection Board.
8. Section 321 deals with the extension of powers in relation to the functions of the Selection Board.
9. Section 322 deals with expenditure of Staff Selection Commission.
10. Section 323 deals with the annual report of the Staff Selection Commission.
11. The annual report shall be submitted to the Governor of the State.
12. The State Government Staff Selection Commission is considered as an important organization in selecting the required employees of the State Government.

7. தமிழ்நாடு உள்கட்டமைப்பு மேம்பாட்டு வாரியம் பற்றி சிறு குறிப்பு வரைக.

Write a note on Tamil Nadu Infrastructure Development Board (TNIDB).

1. Inception 2012.
2. Initiated as a statutory body.

Its main functions are:

1. Undertaking various infrastructural projects of the state.
2. Funding of infrastructure projects.
3. Its main task is to develop projects such as highways, constructions for power generation, solid waste management, tourism, urban transport planning, school campuses etc.
4. The main objective of this organization is to develop infrastructure projects suitable for further investment and thereby improve the economy of the state.

8. பொது கணக்கு குழுவின் பங்கு பற்றி பகுப்பாய்வு செய்க.

Examine the role of Public Accounts committee (PAC).

1. It is the Finance Committee of Parliament.
2. The Public Accounts Committee was first established in 1921.
3. This Committee continued after the Constitution of India came into force.
5. It shall function under the rules of the Lok Sabha.
6. Total 22 members in this committee 15 members from Lok Sabha and 7 members from Rajya Sabha.
7. Rajya Sabha member's cannot become member of the committee.
8. The Chairman of the Committee shall be appointed by the Speaker of the Lok Sabha for a term of one year.

Main Tasks:

1. To examine whether the allocated amount has been properly spent as per the budget statement.
2. Scrutiny of the audit report submitted by the Comptroller Auditor General (CAG).
3. Submitting advice and recommendations to Parliament regarding financial management.
4. Ministers cannot be members of this committee.
5. The Committee does not control the Ministers in any way.
6. The recommendations of the Committee shall not bind the Government.

9. இந்திய அரசின் தொகுப்பு நிதி மற்றும் அவசர கால நிதியம் பற்றி விளக்குக.

Elucidate Consolidate Fund of India and Contingency Fund of India.

Consolidated Fund of Government of India:

1. Article 266 of the Constitution.
2. Most of the revenue that can accrue to the Govt. various types of taxes like revenue tax, central tax, customs duty etc. will be included in this.
3. Non - Tax income is also included in this.
4. All important expenditure of the Government shall be met from this fund.

5. Consent of Parliament is mandatory for expenditure from this fund.
6. Expenditure will be incurred from this fund only after the passage of Appropriation Bill.

Contingency Fund:

1. Article 267 of the Constitution of India.
 2. The Parliament has created this Contingency Fund in the name of permission given by the Constitution of India.
 3. Expenditure can be incurred from this fund when some unexpected expenses arise.
 4. It shall function exclusively in the name of the President on behalf of the Central Administration.
 5. The Central Finance Secretary shall administer this fund on his behalf every.
 6. The Government shall allocate a certain amount to this fund in the annual budget statement.
 7. The contingency fund currently has a balance of Rs.30000 crores.
 8. Expenditure from these Fund does not require prior approval of Parliament.
10. முதலமைச்சருக்கான பொருளாதார ஆலோசனை குழு பற்றி குறிப்பு தருக.

Give an Account on Tamil Nadu Economic Advisory Council to Chief Minister.

A special advisory committee has been set up to boost the economy of Tamil Nadu.

Members of the Committee:

1. Famous Nobel Laureate Economist – 'Esther Dublay'.
 2. Former Reserve Bank Governor – 'Raghuram Rajan'.
 3. Chief Economic Adviser to Central Government – 'Arvind Subramanian'.
 4. Development Economist – 'Jean Drees'.
 5. Former Union Finance Secretary – 'Narayanan'.
 6. The Government shall take economic measures as per the advice of this Committee.
 7. It is an important aspect to achieve Tamil Nadu's main goal of becoming a trillion economy by 2030.
11. 2030 - ல் தமிழ்நாடு ஒரு பில்லியன் பொருளாதாரம்- கருத்துரைக.

Tamil Nadu to be a One Trillion Economy by 2030 – Comment.

1. India's second largest economy by GDP of the state.
 2. About 60% of the state is urbanized.
 3. The share of agriculture in the economy of the state is **11 percent**.
 4. Share of manufacturing sector is **34 percent**.
 5. Share of service sector is **55 percent**.
 6. State with highest human resource in India.
 7. To boost the state's economy to one trillion by 2030. The government has taken action.
 8. Various sectoral activities have been undertaken as a result.
 9. Mainly for this investment investors conference has been held at international level, various sector specific export parks and zones have been created, technology oriented manufacturing.
 10. Also Defense Industrial Corridor, Industrial Corridors (Chennai Kanyakumari Industrial Corridor) Sectoral Special Economic Zones have been created.
 11. Automobile Special Economy Zone (SEZ) Chennai.
 12. BIOPHARMA SEZ.
 13. International Furniture Park Tuticorin.
 14. Various MoUs have been entered into to promote investment in the service sector.
12. மத்திய நிதி அமைச்சகத்தின் பல்வேறு துறைகள் பற்றி குறிப்பு தருக.

Give a detail account on various departments of Union Ministry of Finance.

The Union Finance Ministry was accorded Cabinet status.

1. Department of Economic Affairs:

Preparation of Annual Financial Statement.

2. Department of Expenditures:

Overseeing various types of expenditure.

3. Department of Revenue:

It is responsible for the administration of direct and indirect taxes.

4. Department of Financial Services:

Provides various financial related services.

5. Department of Investment and Public Assets Management:

1. Proceedings relating to disinvestments of assets and shares of PSUs.
2. Indian Accounts and Audit Department.

13. மாநில பெண்கள் ஆணையத்தின் பங்கு மற்றும் செயல்பாட்டினை விவரி.**Describe the role and functions of State Women Commission.**

1. Tamil Nadu State Commission for Women was formed in 1993
2. It is Statutory Body.
3. It consists of Chairman and 9 members

Tasks and Activities:

1. Different types of problems faced by women and their solutions.
2. Advice the government on policies related to women.
3. To ensure constitutional and statutory protection given to women.
4. Advice the government on various programs related to women.
5. To inquire into the grievances of women and provide redressal thereof.

14. போக்ஸோ சட்டம். POCSO Act.

1. Protection of Children from Sexual Offences Act It is known as POCSO Act.
2. This Act was introduced in 2012.

Main objective of the Act:

It is a law that can punish those who engage in such offenses as well as related issues.

Ministry:

1. Union Ministry of Women and Child Development.
2. Special Features Special Courts shall be set up under this Act to hear cases relating thereto.
3. Children under the age of 18 are defined.
4. The present amendment of the Act provides for a maximum penalty of death.

15. மதிப்பீடு குழு. Estimates Committee.

1. Parliament is an important committee on finance.
2. Origin 1921 before Independence.
3. 1950 as per recommendation of Finance Minister John Mathai.
4. Number 30 members.
5. All belong to the Lok Sabha.
6. Member of Rajya Sabha has no representation in this committee.

Activity:

To carry out investigations on the expenditure mentioned in the annual financial statement and to submit a report to the Parliament on the public expenditure.

16. மெய்நிகர் நீதிமன்றங்களை வரையறுக்க.**Define Virtual Courts.****Virtual Courts.**

1. Virtual Courts or e-Courts is a concept that aims to eliminate the presence of litigants or lawyers in court and resolve cases online.

2. Following the coronavirus pandemic in 2020, all courts across the country are using video conferencing for court proceedings.
3. Earlier, Artificial Intelligence (AI) based portal 'SUPACE

Benefits:

1. Affordable justice
2. Transparency
3. Speedy dispensation of justice

Challenges:

1. Functional difficulties
2. Maintenance of E-Court Record
3. Hacking and Cyber Security

17. நம்பிக்கை இணையம் பற்றி சிறு குறிப்பெழுதுக.**Write a short note on Nambikkai Inaiyam.**

1. A state-level web of trust infrastructure can be used by Tamil Nadu government departments in a ready-to-use system and serve as a single source for all processes.
2. Land documents, education certificates, marks certificates.
3. Certificates and licenses issued through the e-service platform will help in certifying the authenticity of genuine seed certificates, handicrafts for agriculture sector.
4. Web of Trust Infrastructure This infrastructure automates inter-departmental work by sharing public ledgers of various departments.
5. Conceptualization work is underway to track assets, licenses and Geographical Index (GI) products for environment, climate change and forestry and for the handloom, handicrafts, textile and khadi sectors.

18. PRAGATI – Examine.**PRAGATI – ஆராய்க.**

1. Commencement 2015.
2. It is an integrated site.
3. To redress the grievances of the people.
4. It is a platform established to bring the government programs to the people and monitor them.
5. It reviews various government schemes across the country.
6. It is the Information and Communication Technology platform in the Prime Minister's Office.
7. It monitors various government programs and its activities directly from the Prime Minister's office.
8. These aim at proper implementation of the scheme, monitoring of the scheme, adjudication of grievances.

19. தேசிய நில பணமாக்கல் கழகம் என்றால் என்ன?**What is National Land Monetization Corporation?**

1. Commencement 2022.
2. Functioning under the Union Ministry of Finance.

Main Tasks:

1. Long-term leasing of surplus land, buildings, unused land etc. owned by Government and Public Sector Undertakings.
2. Utilization of the income from these for various welfare schemes
3. Also fixing the government fiscal deficit.
4. By these the lands and buildings shall be leased only of unimportant surplus land.
5. Its license rests with Govt.
6. And it is different from stock lamp.

7. About 30 lakh acres of surplus land is owned by Railways and Defense Department.
8. These will lead to increase in non-tax revenue of the government if left on a long-term basis.

20. 'வழிகாட்டுதல் கோட்பாடுகள் ஆளுகையில் அடிப்படைகள்' – ஆராய்க.

'Directive Principles are fundamentals in Governance' – Examine.

These principles aim at ensuring socio economic justice to the people and establishing India as a Welfare State.

1. Ideals which the State should follow
2. Reducing Inequalities
3. Human Rights
4. Women Empowerment
5. Policies like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) get their authority from Article 39(a) the right to adequate means of livelihood.
6. Laws such as the Child Labour (Prohibition and Regulation) Act 1986 bolster the canons of Article 39(g) which deals with the protection of children.

21. 'பேரிடர் அபாயத்தைக் குறைப்பதற்கான நடவடிக்கையின் செண்பாய் கட்டமைப்பு' - விவாதிக்க.

'Sendai framework of Action for Disaster risk reduction' – Discuss.

1. SFDRR is an international Treaty
2. By UN member states in March 2015
3. It has framework for 15-year i.e. 2015 to 2030.
4. State has the primary role to reduce disaster risk
5. Understanding disaster risk
6. Strengthening disaster risk governance to manage disaster risk
7. Investing in disaster risk reduction for resilience
8. Enhancing disaster preparedness for effective response and recovery, reconstruction and rehabilitation.

22. ஆபத்து மற்றும் பாதிப்பை எடுத்துக்காட்டுகளுடன் வேறுபடுத்துக.

Differentiate Hazard and Vulnerability with examples.

Hazard is a process, phenomenon or human activity that may cause loss of life, injury or other health impacts, property damage.

1. Social and economic disruption or environmental degradation.
2. Hazards may be natural, anthropogenic or socionatural.

Vulnerability is the inability to resist a hazard or to respond when a disaster has occurred.

1. People who live on plains are more vulnerable to floods than people who live hilly regions.
2. Vulnerability depends on several factors such as people's age health,
3. Families with low incomes often live-in high-risk areas around cities, because they can't afford to live in safer (and more expensive) places, this is what we call economic vulnerability.

23. இந்தியாவில் வறட்சிக்கான பல்வேறு காரணிகளைக் குறிப்பிடுக.

Highlight various factors for drought in India.

1. Drought is characterised by a temporary decline in the availability of water or moisture that is significantly below the average or expected level for a certain period of time.
2. Lean monsoon and below average rainfall.
3. Late onset or early withdrawal of monsoons.
4. Large scale deforestation.
5. Ecologically hazardous mining.
6. Excessive pumping of ground water.
7. Excessive use of HYV (High Yielding Varieties).

24. தமிழ்நாடு காலநிலை மாற்ற இயக்கத்தின் முக்கிய இலக்குகளை பட்டியலிடுக.

List out the key goals of Tamil Nadu Climate Change Mission.

1. The Tamil Nadu Government has proposed goals for the climate change mission.
2. Tamil Nadu accounts for 172.83 metric tons of carbon dioxide equivalent emissions (MtCO₂e) out of the 2953 MtCO₂e emissions at the national level, with the power sector accounting for 67 percent of the MtCO₂e.
3. Ariyalur is the most vulnerable district to climate risks because of high sensitivity and low adaptive capability.
4. Other districts vulnerable to climate risk are Nagapattinam, Ramanathapuram, Thiruvarur, Thiruvallur, Thanjavur, Perambalur, Pudukottai, and Thiruvannamalai.
5. The 10-year goal to enhance the green cover in the state from 23.7 per cent to 33 per cent.
6. Promoting green technology to generate green jobs.
7. Reducing greenhouse gas emissions.
8. Clean and green energy, alternative fuel sources,
9. Alternative solutions to single use plastic.
10. Promoting sustainable practices for the disposal of solid waste, including sewage, e-waste, bio-medical waste etc.

25. பேரிடர் தாங்கும் உள்கட்டமைப்பின் கூட்டணி பற்றி ஒரு சிறு குறிப்பெழுதுக.

Write a short note on coalition of Disaster resilient Infrastructure.

The CDRI was launched by the Prime Minister of India United Nations Climate Action Summit on the 23rd September, 2019, at New York.

1. It is a global partnership of National Governments, UN agencies and programmes
2. Multilateral development banks and financing mechanisms, the private sector, academic and knowledge institutions.
3. Resilience of infrastructure systems to climate and disaster risks, ensuring sustainable development.
4. Technical Support and Capacity-building
5. Research and Knowledge Management
6. Advocacy and Partnerships

26. மனித உரிமைகள் மற்றும் அடிப்படை உரிமைகளை வேறுபடுத்துக.

Differentiate Human Rights and Fundamental Rights.

Fundamental Rights means the primary rights of the citizens which are justifiable and written in the constitution.

1. Basic Rights Only
2. It is country specific.
3. Right of freedom Constitutionally guaranteed(Art 32 and 226)
4. Enforceable by the court of law.
5. EXAMPLE – Part 3 Indian constitution
6. Human Rights are the basic rights that all the human beings can enjoy, no matter where they live, what they do, and how they behave, etc.
7. It is universal.
8. Right of life with dignity
9. Internationally guaranteed
10. Enforceable by United Nation Organization
11. Ex : UDHR

27. தகவல் அறியும் உரிமை (தீருத்த) சட்டம், 2019 குறித்து எழுதுக.

Write a note on Right to Information (Amendment) Act, 2019.

Salaries and Allowances:

1. The Centre shall have the powers to set the salaries and service conditions of Information Commissioners at central as well as state levels.

Term:

1. The central Chief Information Commissioner and Information Commissioner appointment will be such term as may be prescribed by the Central Government
2. The original Act prescribes salaries, allowances and other terms of service of the state Chief Information Commissioner as “the same as that of an Election Commissioner”,
3. The salaries and other terms of service of the State Information Commissioners as “the same as that of the Chief Secretary to the State Government”,
4. The Amendment proposes that these “shall be such as may be prescribed by the Central Government”.

28. ஜனநாயகத்தில் உரிமையின் முக்கியத்துவத்தை விளக்குக.

Elucidate the significance of Right in Democracy.

1. Without rights, democracy in a country becomes ineffective and meaningless.
2. Safeguards minorities
3. People has the right to participate in the democratic process.
4. Maintain law and order
5. Choose a better leader to run the government.
6. People can live dignified life
7. Democratic elections, citizens should have the right to vote.

29. சிறுபான்மையினரை வரையறுத்து அதன் வகைகளை விளக்குக.

Define Minorities and Explain its types.

1. A minority group can simply be understood in terms of demographic sizes within a population.
2. Group in society with the least number of individuals is therefore the minority.
3. A category of people who experience relative disadvantage as compared to members of a dominant social group.

Types:

1. Racial and Ethnic Minorities
2. Gender and Sexuality Minorities
3. Religious Minorities
4. Linguistic minorities

30. ஏதேனும் இரண்டு விடை அளிக்க: Attempt any two:

(i) **சட்ட உரிமை. Legal Right.**

Legal rights are protected and enforced by ordinary law of the country.

1. May be changed by the legislature by ordinary Process of law making
2. Not a part of the Basic structure doctrine.

(ii) **தர்மீக உரிமை. Moral Right.**

Moral Rights are those rights which are based on human consciousness.

1. These are based on the human sense of goodness and justice.
2. If any person violates any moral right, no legal action can be taken against him. The state does not enforce these rights.

(iii) **அரசியலமைப்பு உரிமை. Constitutional Right.**

1. All rights that have been conferred to the citizens and enshrined in the Constitution of India.
2. A constitutional right is a supreme right guaranteed by our Constitution.

3. In case of any contradiction with Constitutional Rights, that law will be declared null and void.

31. இந்தியாவில் நிரந்தர மண்டலங்கள்.

Earthquake Zones in India.

1. It is a natural phenomenon caused by the release of energy that creates seismic waves that travel in all directions.
2. A seismograph or seismometer is an instrument used to detect and record earthquakes.
3. The point where the energy is released (below the Earth's surface) is called the focus or hypocenter of the earthquake.
4. The point on the Earth's surface directly above the epicenter is called the epicenter, where the earthquake waves are first experienced. Earthquake zones
5. Zone V (Severe Severity Zone): Parts of Jammu and Kashmir (Kashmir Valley).
6. Western part of Himachal Pradesh, eastern part of Uttarakhand, Kutch in Gujarat, part of northern Bihar, all North Eastern states of India and Andaman & Nicobar Islands.
7. Zone IV (Severe Extreme Zone): Ladakh, parts of Jammu & Kashmir, parts of Himachal Pradesh and Uttarakhand, Haryana, parts of Punjab, Delhi, Sikkim, northern part of Uttar Pradesh, parts of Bihar and West Bengal, parts of Gujarat and parts of Maharashtra near the west coast. A part of Western Rajasthan.
8. Zone III (Moderately Severe Zone): Kerala, Goa, Lakshadweep, parts of Uttar Pradesh, parts of Haryana, Gujarat and Punjab, parts of West Bengal, West Rajasthan, Madhya Pradesh, part of Bihar, northern parts of Jharkhand, Chhattisgarh, parts of Maharashtra, Odisha, Andhra Pradesh, Telangana, Tamil Nadu and Karnataka.
9. Zone II (Least Intensity Zone): Parts of Rajasthan, Uttar Pradesh, Gujarat, Haryana, Madhya Pradesh, Maharashtra, Odisha, Andhra Pradesh, Telangana, Karnataka and Tamil Nadu.

32. PM CARES – நிதி.

PM CARES – fund.

1. Prime Minister's Citizen Assistance and Relief in Emergency Situations Fund (PM-CARES Fund)
2. To deal with any kind of emergency or distress situation like posed by the COVID-19 pandemic. By central government.
3. Trust, Chairman – Prime minister.
4. Other Members – Defence Minister, Home Minister and Finance Minister.
5. The Fund enables micro-donations as a result of which a large number of people will be able to contribute with the smallest of denominations.
6. The Fund will strengthen disaster management capacities and encourage research on protecting citizens.
7. Contribution to PM – CARES Fund will qualify as CSR Expenditure.
8. Ministry of Corporate Affairs has clarified that contributions by companies towards the PM-CARES Fund will count towards mandatory Corporate Social Responsibility (CSR) expenditure.
9. Under the Companies Act, 2013.
10. Companies with a minimum net worth of Rs 500 crore.
11. Turnover of Rs 1,000 crore.
12. Net profit of Rs 5 crore.
13. Required to spend at least 2% of their average profit.

33. வேலைவாய்ப்பு உதவி திட்டம் விளக்குக.

Explain the Unemployment assistance scheme.

1. Tamil Nadu Government started Unemployment Assistance Scheme for the welfare of unemployed youth of the state.

2. Unemployment Assistance Scheme provides monthly financial assistance to youth of weaker sections to support their job search requirements, so that they can get the right job according to their qualification.
3. Tamil Nadu Unemployment Assistance Scheme was started in 2006 in order to reduce the hardship of people who are searching job in various sectors.
4. Scheme is implemented in the state by Department of Employment and Training, Tamil Nadu.
5. The state has transformed employment exchange as Career Centres by forming District Employment and Coaching cum Guidance Centres in every district.
6. State is providing a platform for job seekers and employers to connect through District Employment and Coaching cum Guidance Centres.
7. Scheme is providing great help to differently abled persons by providing them financial assistance as well as guidance for job placement.

34. மெய்நிகர் கற்றல் பற்றிய சிறு குறிப்பெழுதுக.

Write a short note on Virtual Learning.

1. Online education comprises digital tools and technologies, used innovatively, during teaching and learning. It is also referred to as Technology Enhanced Learning (TEL) or e-Learning.
2. It was envisioned as an alternative means of spreading modern education, however, it has its own shortcomings.
3. Modern education focuses on imparting education in away that develops the thinking faculty in the student's mind and guides logical reasoning based on a scientific outlook.
4. Accessibility
5. Productivity

Issue:

1. Access
2. Issue of privacy

35. குடியரசுத் தலைவரின் பரிசீலனைக்காக ஆளுநரால் ஒதுக்கப்படும் மசோதாவை பற்றி குறிப்பு தருக.

Give an account reservation of bills by the Governor for consideration of President.

1. Article 200 of the Indian Constitution deals with the powers of the Governor with regard to assent given to bills passed by the State legislature and other powers of the Governor such as reserving the bill for the President's consideration.
2. Article 201 pertains to 'Bills Reserved for Consideration'.

Veto over State Bills:

1. The governor is empowered to reserve certain types of bills passed by the state legislature for the consideration of the President.
2. The President can withhold his assent to such bills not only in the first instance but also in the second instance.
3. The President enjoys absolute veto (and not suspensive veto) over state bills.
4. The President can exercise pocket veto in respect of state legislation also.

36. 'இந்திய அரசியலமைப்பு ஒற்றையாட்சி அடிப்படையில் கூட்டாட்சி முறையை வழங்குகிறது'-நியாயப்படுத்துக.

'Indian constitution provides federal system with unitary basis' - Justify.

1. **Single Constitution:** both centre and states
2. Centre's control over States

3. **Existence of States depends on the Centre:** The boundary of a State can be changed by creating new states out of the existing States.
4. **Single citizenship:** In a true federal state, citizens are given dual citizenship. In India however, the citizens enjoy single citizenship, i.e., Indian citizenship or citizenship of the country as a whole.
5. **Unified judiciary:** India has a unified or integrated judicial system. The Supreme Court is the highest court of justice in the country and all other subordinate courts are under it.
6. **Proclamation of national emergency:** When national emergency is declared, the Union or Central government becomes all powerful and the State governments come under the total control of it. The State governments lose their autonomy.

37. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) மத்திய மாநில உறவுகளுக்கு சர்க்காரியா கமிஷன் பரிந்துரை.

Sarkaria commission recommendation on Centre-State relation.

1. In 1983, the Central government appointed a three-member Commission on Centre-state relations to review the working of the existing arrangements between the Union and the States
2. Article 263, a permanent Inter-State Council known as the Inter-Governmental Council should be established.
3. Article 356 (President's Rule) should only be invoked under the most extreme circumstances and as a final resort if all other options have failed.
4. The institution of All-India Services should be strengthened further, and other services of this type should be established.

(ii) மத்திய மாநில உறவில் புஞ்சி கமிஷன் பரிந்துரை.

Punchhi commission recommendation on Centre-State relation.

1. A commission on centre-state relations set up by the Indian government in 2007,
2. Presented its Report in March 2010.
3. Impeachment of the Governor is recommended by the state legislature.
4. Articles 355 and 356 of the Constitution should be changed in relation to those two articles. By limiting the misuse of authority by the centre, the suggestion aims to protect the interests of the States.

(iii) மத்திய மாநில உறவுகளின் நிர்வாக சீர்திருத்தக் ஆணையம் பரிந்துரை.

Administrative reforms commission recommendation on Centre State relation.

1. The 1st ARC was set up in 1966 to examine the public administration of the country and make recommendations for reform and reorganisation.
2. The 2nd ARC (2005) prepared a detailed blueprint to revamp the public administrative system.
3. It submitted 15 reports to the Government covering areas like RTI,
4. Ethics in governance, local governance,
5. Terrorism, public administration
6. E-governance, financial management.
7. State Information Commission
8. Paying wages via post offices or banks (NREGA),
9. The Districts must directly receive the funds
10. Emergency and long-standing moderation plan for District Disaster Management.

38. மாநில நிர்வாகத்தில் ஆளுநரின் பங்கை பற்றி விளக்குக.

Elucidate Role of Governor in State Administration.

1. Article 153-167 in the Indian Constitution deal with the provisions related to the state governments of the country.
2. Every executive action that the state government takes, is to be taken in his name.
3. He may/may not make rules to simplify the transaction of the business of the state government.
4. Chief Ministers and other ministers of the states are appointed by him.
5. He appoints the advocate general of states and determines their remuneration
6. He appoints the following people
7. State Election Commissioner
8. Chairman and Members of the State Public Service Commission
9. A constitutional emergency in the state is recommended to the President by him.
10. The governor enjoys extensive executive powers as an agent of the President during the President's rule in the state. Governor is a titular head or constitutional head.

39. இயல்புச் சூழலில் வளங்காப்பு மற்றும் வெளியிட வளங்காப்பு பல்லுயிர் பாதுகாப்பை விளக்குக.

Explain In-situ and Ex-situ conservation of Biodiversity.

In situ Conservation:

1. In-situ conservation is the on-site conservation of genetic resources in natural populations of plant or animal species.
2. In India, ecologically unique and biodiversity-rich regions are legally protected as biosphere reserves, national parks, sanctuaries, reserved forests, protected forests and nature reserves.
3. India now has biosphere reserves, national parks and wildlife sanctuaries.
4. Plantation, cultivation, grazing, felling trees, hunting and poaching are prohibited in biosphere reserves, national parks and sanctuaries.

Ex situ conservation:

1. Threatened animals and plants are taken out from their natural habitat and placed in special setting where they can be protected and given special care.
2. Zoological parks, botanical gardens, wildlife safari parks and seed banks serve this purpose.
3. The national gene bank at National Bureau of Plant Genetic Resources (NBPGR)

40. "ஸ்டார்ட்-அப் இந்தியா, ஸ்டாண்ட்-அப் இந்தியா" திட்டத்தை பற்றி குறிப்பு தருக.

Give an account on "Start-up India, Stand-up India" scheme.

1. **Startup** India scheme is an important government scheme that was launched on 16th January 2016 with an aim to promote and support the start-ups in India by providing bank finance.
2. Funding support and incentives to the various start-ups of the country.
3. To provide Industry-Academia Partnership and Incubation.
4. Simplification and Handholding.

Stand up India:

1. It was launched in April 2016 to promote entrepreneurship at the grass-root level focusing on economic empowerment and job creation.
2. To sector of people such as SCs, STs and Women Entrepreneurs.
3. Facilitates Bank Loan.
4. The objective of this scheme is to facilitate bank loans between Rs.10 lakh and Rs.1 crore to at least one SC or ST borrower and at least one woman borrower per bank branch of Scheduled Commercial Banks for setting up a Greenfield enterprise.

5. Manufacturing, services or the trading sector.

41. ஏதேனும் இரண்டுக்கு விடை அளிக்க: Attempt any two:

(i) மாநிலங்களுக்கு இடையேயான கவுன்சில்கள்.

Inter-state councils.

1. Year- 1990 by sarkaraia comission recommendation
2. The inter-state council is a body that has been empowered to investigate and discuss subjects of common interest between the Union and state(s), or among states.
3. Better coordination of policy and action on these subjects, and deliberations on matters of general interest to the states, which may be referred to it by its chairman.
4. Matters of general interest to the states as may be referred by the chairman to the council.
5. The Council may meet at least thrice in a year.
6. Prime Minister Chairman
7. Chief Ministers of all States
8. Chief Ministers of Union Territories having a Legislative Assembly
9. Administrators of UTs not having a Legislative Assembly
10. Six Ministers of Cabinet rank
11. Support cooperative federalism in the country and activate the council and zonal councils by organising regular meetings.

(ii) மண்டல சபைகள்.

Zonal councils.

1. Statutory bodies established by an act of parliament
2. State reorganization Act of 1956
3. Home minister of central government is the common chairman of all the zonal council
4. Other members include: The Chief Ministers of the States included in each zone act as Vice-Chairman of the Zonal Council for that zone by rotation, each holding office for a period of one year at a time, Chief Minister and two other Ministers as nominated by the Governor from each of the States and two members from Union Territories included in the zone.
5. At present there are six zonal councils– Northern, Central, Eastern, Western, Southern and North-Eastern [North eastern zonal council Act]
6. National integration
7. Centre and the States to co-operate

(iii) தேசிய வளர்ச்சி கவுன்சில்.

National development council.

1. It was formed by executive resolution in 1952.
2. It is neither constitutional body nor statutory body.
3. **Chairman:** Prime Minister of India and includes all Union Ministers, Chief Ministers of all the States and Administrators of Union Territories and Members of the Planning Commission.
4. To strengthen and mobilize the effort and resources of the nation in support of the Plan.
5. To promote common economic policies.
6. Balanced and rapid development of all parts of the country.

42. தமிழ்நாடு வேலைவாய்ப்பு மற்றும் பயிற்சித் துறையின் பணிகள் யாவை?

What are the functions Employment and Training Department of Tamil Nadu?

1. Creation of Employment Exchanges.

2. Study Circles functioning in all the District Employment and Career Guidance Centres were established in the year 1999 with a view to assist aspirants of various competitive examinations.
3. Provide counseling and relevant information about employment and assisting youth to choose their career based on their aptitude.
4. Arrange for job fairs and transparent recruitment processes for all private establishments at all levels.
5. Skill Assessment and Job Mapping.
6. Involve the community to promote entrepreneurship spirit among youth.

43. வளர்ச்சி செயல்பாட்டில் தன்னார்வ தொண்டு நிறுவனங்களின் முக்கியத்துவத்தை பட்டியலிடுக.

List out the importance of NGO's in development process.

1. Poverty Alleviation
2. Importance of NGO in the Promotion of Education
3. Protection of Environment and Wildlife
4. Human Rights Activism
5. Women's Rights
6. Health care and Medical services
7. Improves government performance

44. இந்தியாவில் மத்திய-மாநில நிர்வாகம் சார்ந்த உறவு பற்றி விளக்குக.

Explain Centre-State Administrative relation in India.

1. Distribution of legislative powers(7th schedule)
2. Parliament has exclusive jurisdiction (union list)
3. State legislature- state list
4. Parliament and state legislature -concurrent list
5. Residuary powers- parliament
6. (Article 365) since any failure to abide by them could invite the use of Article 356
7. Cooperation between the centre and the states: The following provisions have been included to secure cooperation and coordination between the centre and the states
8. Parliament can provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valleys (Art.262)
9. President can establish an Inter-state council to investigate and discuss subject of common interest between the centre and the states(Art.263)

45. மாநில சட்டமன்றத்தில் சபாநாயகரின் பங்கினை விளக்குக.

Elucidate the role of speaker in State legislative assembly.

1. Legislative assembly (also known as Vidhan Sabha) is the lower house of the bicameral states and sole house of the unicameral states.
2. Article 178 -provides of a Speaker to preside over sessions of the Legislative Assembly Indian Speaker also enjoys powers and position similar to those of the British speaker.
3. Legislative Functions- law making
4. Control over the Executive- standing committes
5. Electoral Functions- president election
6. Functions related to Constitutional Amendments- Ratification under Article 368

46. வருவாய் நிர்வாக ஆணையரின் செயல்பாடுகளை விளக்குக.

Explain the functions of Commissioner of Revenue Administration.

Revenue administration functions:

1. Providing efficient delivery of services of various Government schemes to the people of Tamil Nadu.

2. Providing relief and implementing rehabilitation measures for those affected by Natural Calamities.
3. Functioning as the custodian of Government lands and ensuring proper maintenance of land records for the State.
4. Implementation of Land Reforms and providing land to the needy and eligible persons.
5. Commissionerate of Revenue Administration, Disaster Management and Mitigation.Land Administration, Land Reform, Survey and Settlement, Urban Land Ceiling and Land Tax.

47. எஸ்.எம். சிங்கிவி குழு மற்றும் அதன் முக்கியத்துவம் பற்றி எழுதுக.

Write about L.M. Singhvi Committee and its significance.

1. Under the chairmanship of L.M.Singhvi
2. Rajiv Gandhi government created a committee
3. Year 1986
4. Local self-government should be acknowledged by the Constitution.
5. Panchayat elections on a regular basis
6. Panchayati Raj judicial tribunal to deal with issues relating to the administration of Panchayati Raj.
7. Adequate financial resources
8. Nyaya Panchayat
9. Gram Sabha represents direct democracy
10. Gram Sabha should be prioritized.

48. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) சிப்கோட்

SIPCOT

1. The SIPCOT was formed in 1971
2. To promote industrial growth in the state and to advance term loans to medium and large industries.
3. Development of industrial complexes/parks/industrial estate in Nallampalli Road growth centres with basic infrastructure facilities.
4. Establishing sector-specific Special Economic Zones (SEZs)
5. Implementation of Special infrastructure Projects.
6. SIPCOT IT Park is the largest Information Technology Park in Asia, located in siruseri near chennai.

(ii) திஐசி

TIIC

1. Established in 1949
2. First State level Development Financial Institution promoted for catalyzing industrial development
3. To continuously evolve schemes and processes which are customer-centric.
4. Development of MSMEs in the State.
5. To become the preferred destination for seeking term finance in the State.
6. Working with Fintech companies, NBFC, SFB, MFI and other large industries.

(iii) டான்சி

TANSI

1. The Tamil Nadu Small Industries Corporation Limited, popularly known as TANSI, was formed in the year 1965
2. To serve as Training cum Demonstration Centres
3. To provide infrastructure for the development of industries and
4. To ensure dispersal of economic growth.

5. For small industries development
6. TANSI manufacturing a wide range of high quality paints and allied products under brand name of “ARASU”.

49. ‘முகவுரை இந்திய அரசியலமைப்பின் ஒருங்கிணைந்த பகுதியாகும்’ - நியாயப்படுத்துக.

Preamble is an Integral part of Indian Constitution’ - Justify.

1. The Supreme Court ruled in the LIC of India case (1995) that the Preamble is an integral part of the Constitution.
2. core ideas, purposes, and philosophical postulates that the Constitution of India stands for are contained in the Preamble to the Constitution of Free India
3. Outlines the Constitution’s Ideals And Philosophy
4. Justice, Liberty, Equality & Fraternity as Goals
5. People As the Source of the Constitution

50. மத்திய அரசின் பெண் விவசாயிகள் மேம்பாட்டிற்கான நல திட்டங்கள் யாவை?

What are the Union government’s welfare schemes for the development of women farmers?

1. Mahila Kisan Sashaktikaran Paryojana, Deendayal Antyodaya Yojana – Sub-component of National Rural Livelihoods Movement.
2. Aims to empower women by making systematic investments to improve their participation in agriculture-based livelihoods.
3. Deendayal Antyodaya Yojana - National Rural Livelihood Initiative - A scheme to introduce women to latest technologies in agriculture and allied sectors.
4. Trainings are provided to women farmers under the schemes of Ministry of Agriculture and Farmers Welfare and Ministry of Rural Development.
5. The government is taking various measures to increase the participation of women farmers in the agriculture sector. This includes providing more support and assistance to female farmers than to male farmers.
6. To introduce women to modern technologies in agriculture and allied sectors, trainings are provided to women farmers under the schemes.

51. இந்தியாவில் உள்ளாட்சி அரசு எதிர்கொள்ளும் சவால்களை விளக்கவும்.

Explain the challenges faced by the local self-government in India.

1. Management Problems: Lack of coordination between officers and subordinates.
2. Unscientific distribution of money and activities: This is due to lack of knowledge about basic issues and their importance.
3. Regionalism: Lack of cohesion among local people in the name of region, religion and caste.
4. Lack of Funds: Due to lack of funds and funds, development work suffers.
5. Excessive government control: This leads to corruption and patronage.
6. Inferior staffing: lax approach to management.

52. தமிழகத்தில் கனிமவள உற்பத்தி மற்றும் அதன் வருவாய் ஆக்கம் குறித்து எழுதுக.

Write about Mineral resources production and its revenue generation scope in Tamilnadu.

Minerals in Tamil Nadu can be divided into three main categories

- 1) Lignite: These are found in Tamilnadu districts like Nagapattinam, Tiruvarur, Thanjavur. Its main uses are electricity generation and fossil fuels.
- 2) Graphite: Districts where these are found are Sivagangai, Madurai. Their main use is as electrical conductors.
- 3) Limestone: The districts where these are found in Tamil Nadu are Ariyalur, Perambalur, Virudhunagaram, Salem, Namakkal and Karur. Their main use is cement production,

pharmaceutical products production, chemical products production, metals production.

- 4) Magnesite: Districts where these are found are Salem, Namakkal and Karur in Tamil Nadu. Their main use is heat bearing stones, magnesium cement and electrical insulating stones.
 - 1) Efficient mineral management.
 - 2) Carry out sustainable mining operations
 - 3) Scientific Excavation
 - 4) Carrying out systematic and sustainable mineral production

53. சென்னை-கன்னியாகுமரி தொழில் பெருவழித் திட்டத்தை விவரி.

Explain Chennai - Kanniyakumari Industrial Corridor project.

1) The Chennai Kanyakumari Expressway project is being implemented in Tamil Nadu as a part of the East Coast Economic Expressway to promote port-based economic development in the state. This highway covers 23 districts of the state. Asian Development Bank is providing financial support for this project. A detailed project report for this project has been prepared and completed. Further, the Asian Development Bank has sanctioned financial assistance for the following projects:-

- 1) Upgradation of 16 State Highways at a cost of Rs.6641 crore,
- 2) Construction of 765 KV sub-station at Virudhunagar and 400 KV sub-station at Ottapidaram and connecting power lines at a cost of Rs.4526 crore.

2) Madurai-Dindigul-Virudunagar-Theni, Thoothukudi-Tirunelveli, Ramanathapuram, Cuddalore-Nagapatnam, Tiruchirappalli-Puthukottai-Sivagangai and Ariyalur-Perambalur six terminals have been identified for setting up industrial terminals in this highway project area. In this two industrial terminals namely Madurai-Dindigul-Virudhunagar-Theni and Thoothukudi-Tirunelveli will be implemented in the first phase. A master plan for the project has been prepared and completed. At present, Chipcot Company is setting up industrial parks at Thoothukudi, Virudhunagar, Theni, Sivagangai, Manaparai, Ramanathapuram and Gangaikondan on this highway with its own funds. Among these industrial hubs, most of the land acquisition activities have been completed in Virudhunagar, Thoothukudi, Sivagangai, Theni, Manakudi (Ramanathapuram) and Chakrakottai (Ramanathapuram) and sector-specific projects such as the International Chamber of Commerce Park in Thoothukudi, the Great Textile Park in Virudhunagar, the Food Park in Theni and the Public Industrial Park in Sivagangai. Steps are being taken to establish industrial parks. Discussions are underway with the Asian Development Bank for further funding for the development of the project.

54. இந்தியாவில் இருப்பு மற்றும் எஃகு தொழிற்சாலைகள் குறித்து எழுதுக.

Write a note on Iron and Steel industries of India.

S.No	Names of industries	Place and State	Year of establishment	Manufacturing products
1	Tata Iron and Steel Company (TISCO)	Jamshedpur- Jharkhand	1911	honey
2	India Iron and Steel Corporation (isco)	Burnpur, Hirapur, Guldi West Bengal	1972	Honey iron, raw steel
3	Visveshwaria Iron and Steel Company (VISL)	Bhadravati, Karnataka	1923	Composite honeycomb and seaweed steel
4	Hindustan Steel Company Russia with technical assistance. (HSL)	Philae-Chhattisgarh	1957	Railway and Shipbuilding Equipment,
5	Hindustan Steel Company with	Rourkela- Odisha	1965	Hot and cold rolled plates Electroplated

	technical assistance from Germany (HSL)			plates and electrical plates.
6	Hindustan Steel Company with technical assistance from UK (HSL)	Durgapur, West Bengal	1959	Alloys, construction materials, railway equipment.
7	Hindustan Steel Company with technical assistance from Russia (HSL)	Bokaro, Jharkhand	1972	Ferrous waste and ferrous metal.
8	Salem Steel Plant	Salem-Tamil Nadu	1982	Stainless steel
9	Vijayanagar Steel Plant.	Dornagal-Karnataka	1984	Long and bar steels
10	Visakhapatnam Steel Plant (VSP)	Visakhapatnam, Andhra Pradesh	1981	Hot metal

55. இந்திய தொழிற்சாலைகள் எதிர்கொள்ளும் முக்கிய சவால்கள் குறித்து விவாதிக்க.

Discuss the major challenges faced by industries of India.

- 1) Shortage and fluctuation in power supply.
- 2) Non-availability of large tracts of land.
- 3) Poor access to credit.
- 4) High interest rate on the borrowed loan.
- 5) Unavailability of workers.
- 6) Lack of technical and vocational training of employees.
- 7) Lack of proper living environment near industrial estates.
- 8) Scarcity of raw materials.

56. பொதுநல வழக்கை வரையறுத்து அதன் முக்கியத்துவம் குறித்து விளக்குக.

Define Public Interest Litigation and write its importance.

Public Interest Litigation (PIL):

A Public Interest Litigation (PIL) is a case filed by an aggrieved person or some other body in the court regarding any matter affecting the public welfare. In some cases, the court may proceed arbitrarily on the basis of press reports and on the basis of documents available to the courts. , which can deal with any matter affecting the public interest, such as bad roads, is derived from the American judiciary in the 1970s and is also known as social action litigation.

Importance of Public Interest Litigation (PIL):

- 1) The purpose of Public Interest Litigation is to approach the Court of Common Pleas under Article 32 and 226 (Supreme Court and High Court) and seek legal remedies.
- 2) PIL is an important tool for social change and for upholding the rule of law and hastening the balance between law and justice.
- 3) The original purpose of public interest litigation is to provide justice to the poor and marginalized people.
- 4) It is an important tool to reach those denied human rights.
- 5) It democratizes access to justice for all. Any competent citizen or organization can file petitions on behalf of those who are unable or absent to do so.
- 6) It helps in judicial monitoring of government institutions like prisons, asylums, shelters etc.
- 7) It is an important tool for implementing the concept of judicial review.

8) Increased public participation in judicial review of administrative action is ensured by initiation of public interest litigation.

57. ஆம்புட்ஸ்மேன் (Ombudsman) குறித்து ஒரு குறிப்பு வரைக.

Give an account on Ombudsman.

Appearance:

- 1) 1809 - Introduced in Sweden.
- 2) 1966 - Recommendation of Administrative Reform Commission in India.
- 3) Creation of Lokpal, Lok Ayukta based on this.

Purpose:

- 1) Investigate and administer justice in crimes against central state government officials.
- 2) Civil grievances.
- 3) Public grievances are public grievances due to corruption etc.

Grievance Commissioner- 1966:

- 1) Regulating the activities of government bodies for redressal of citizens' grievances.
- 2) Giving them effective leadership.
- 3) Grievance Redressal Officers appointed in Ministries.

Reasons for formation of ombudsman:

- 1) Excessive proliferation of government activities.
- 2) Discretionary powers vested in officers.
- 3) Delegated Acts.
- 4) Expectations of citizens from authorities.
- 5) Inability to control the executive branch by the legislative branch.
- 6) Cost of delay caused by courts.
- 7) Loss of confidence in governance among citizens.
- 8) Need for independent organization.

Benefits:

- 1) The medium is infallible.
- 2) Apolitical.
- 3) Beyond the regular managerial hierarchy.

Disadvantages:

- 1) Advisory system only.
- 2) No administrative function can be modified.
- 3) Lack of constitutional recognition.

58. லோக்பால் மற்றும் லோக் ஆயுக்தா குறித்து எழுதுக.

Write about Lokpal and Lokayukta.

Lokpal:

- 1) Recommendation of Administrative Reforms Commission since 1966
- 2) Scandi Navion model
- 3) Lokpal Bill was passed in 2013 and became law in 2014.

Purpose:

- 1) Elimination of corruption in public works
- 2) Holding public servants including the Prime Minister accountable

System:

- 1) Chairman – 1 (Retired Chief Justice of Supreme / High Court)
- 2) Members – 8

- 3) 50% members belong to Scheduled Tribes, Minorities, Women
- 4) Tenure – 5 years / 70 years
- 5) No reappointment.

Selection Committee:

- 1) Prime Minister
- 2) Speaker of the Lok Sabha
- 3) Leader of Opposition in Lok Sabha
- 4) Supreme Court Judge
- 5) Legal expert

16th Amendment:

- 1) All Public Servants
- 2) Includes non-governmental organizations receiving foreign donations.

Limitations of Lokpal:

1. Lokpal cannot initiate a case against any Government servant by itself.
2. Emphasizes form rather than nature of complaint.
3. Prevents complaints from coming to Lokpal by providing severe punishment for false (m) frivolous complaints against government servants.
4. Anonymous complaints are not allowed.
5. Legal aid provided to the Government servant against whom the complaint is lodged
6. Limitation of 7 years for filing complaints
7. Very non-transparent method of handling complaints against the Prime Minister

Lok Ayukta:

- 1) States should set up Lokayukta on the model of Lokpal.
- 2) Investigate offenses against Ministers of State, Chief Minister
- 3) 1971 – First introduced in Maharashtra
- 4) Its authority (m) function is not uniform across the country.

Duties and Powers:

- 1) Supervise and regulate intelligence agencies including the Central Intelligence Agency.
- 2) Union Ministers including Prime Minister will come under the jurisdiction of Lokpal.
- 3) Central Intelligence Agency officers may be transferred by Lokpal.
- 4) Special courts will be set up to try the cases.
- 5) The Central Bureau of Investigation may appoint a prosecution team with the approval of the Lokpal.
- 6) The complaint is in the language in the 8th Schedule.
- 7) Protection of complainant.

Drawback:

- 1) Advisory system only.
- 2) No power to punish.
- 3) Judiciary, Army, Navy, Intelligence are exempted.
- 4) Success of Lokpal depends on its functioning.
- 5) Its appointment is not free from political influence.
- 6) Transparency in appointment is essential.
- 7) Lack of constitutional recognition.
- 8) Variation of its structure by month, state

Procedure:

- 1) Report in 60 days
- 2) Result in 30 days

3) Maximum tenure – 2 years

Highlights:

- 1) Free organization.
- 2) No political interference.
- 3) Inquiry is transparent.
- 4) It has the jurisdiction of civil court.

59. உச்ச நீதிமன்ற கொலீஜியம் அமைப்பு மற்றும் தேசிய நீதிபதிகள் நியமன ஆணையம் (NJAC) குறித்து ஒரு குறிப்பு வரைக.

Give an account on Supreme Court Collegium System and National Judicial Appointments Commission (NJAC).

Collegium Structure:

- 1) The collegium system was created by the “Third Judges Case (1998)” and has been in force since 1998. It is used for appointments and transfers of judges in High Courts and Supreme Courts.
- 2) There is no mention of collegium in the Constitution of India or subsequent amendments.
- 3) The SC collegium is headed by the CJI (Chief Justice of India) and comprises four senior judges of the court.
- 4) An HC collegium is headed by its Chief Justice and four senior judges of that court.
- 5) The names recommended for appointment by the High Court Collegium will reach the Government only after the approval of the Chief Justice and the SC Collegium.

National Judicial Appointments Commission:

- 1) A five-judge Constitution Bench based on a 1993 judgment declared the National Judicial Appointments Commission (NJAC) Act and the Constitution (Ninety-Nine Amendment) Act, 2014 unconstitutional in October 2015.
- 2) NJAC will also recommend names for appointment of Supreme Court Judges and appointment and transfer of High Court Judges.

Composition of NJAC

- 1) Chief Justice of India
- 2) 2 Senior Judges of the Supreme Court
- 3) Law Minister of India
- 4) 2 core members selected by the Selection Committee

60. இந்தியாவில் நிர்வாக தீர்ப்பாயங்களின் பங்களிப்பு குறித்து ஆராய்க.

Analyse the role of Administrative Tribunals in India.

- 1) The 42nd Amendment Act of 1976 incorporated the Tribunals into the Constitution of India.
- 2) It includes Sections 323 A and 323 B which establish tribunals to deal with administrative and other issues.
- 3) Section 323 A deals with administrative tribunals, whereas section 323-B deals with tribunals for other matters.
- 4) Administrative Tribunals adjudicate disputes, determine rights between contending parties to redress grievances of employees of Government Public Sector Undertakings, local bodies and perform other functions.
- 5) It is vested in the judicial power of the State and thereby performs quasi-judicial functions as distinguished from purely administrative functions.
- 6) It follows the principles of natural justice and is bound to act judicially.
- 7) It acts transparently, fairly and impartially.
- 8) It is not bound by the strict rules of procedure and evidence prescribed by the Court of Civil Procedure.

(12 MARKS)

1. பாராளுமன்ற அமைப்பில் சபாநாயகரின் பங்களிப்பு மற்றும் நிறை சபாநாயகரின் நடுநிறை நிறைப்பாட்டை சார்ந்தே அமைகின்றது – கருத்துரைக்க.

The role and status of the Speaker in parliamentary system have their foundation in the Speaker's stance on neutrality - Comment.

Speaker of Parliament:

- ✓ The Speaker is ranked highest i.e. 6th in the order of precedence in the country.
- ✓ Adequate powers have been given to the office of the Speaker for the smooth conduct of parliamentary proceedings.

Executive Role of the Speaker:

- ✓ The Speaker is also the Chairman of the Lok Sabha Secretariat.
 - ✓ The power of the Speaker is supreme over the secretarial staff of the House and its security arrangements.
 - ✓ No alteration or addition can be made to the Parliament Building and no new structure can be erected in the Parliament Gardens without the permission of the Speaker.
 - ✓ The decisions of the House are communicated to individuals and officials outside the Parliament through the Speaker.
 - ✓ The Speaker decides the form and manner in which the proceedings of the House shall be published.
 - ✓ In order to move amendments to a Bill, the permission of the Speaker is required.
 - ✓ The neutrality of the Speaker plays an important role in the functioning of parliamentary democracy. The Speaker's role is very important in running the House without prejudice.
 - ✓ It is noteworthy that the Speaker renounces his party membership to maintain neutrality.
2. நீதித்துறை செயல்பாடு என்றால் என்ன? மக்களாட்சியை பாதுகாப்பதில் நீதித்துறையின் பங்களிப்பு குறித்து விவரிக்க.

What is meant by Judicial Activism? and explain the role of Judiciary in protecting Democracy.

Judicial Function:

- ✓ Judicial activism is a concept that originated in the United States in 1947.
- ✓ It has been in practice since Emergency in India.
- ✓ Judiciary plays an important role in upholding and promoting the rights of citizens in a country.
- ✓ The active role of the judiciary in upholding the rights of citizens and protecting the constitutional and legal system of the country is called judicial function.
- ✓ It sometimes implies encroachment into the domain of executive power.
- ✓ Due to the efforts of Justices VR Krishna and PN Bhagwati, judicial activism is considered a success in liberalizing access to justice and providing relief to disadvantaged groups.
- ✓ The Black's Law Dictionary defines judicial activism as "a judicial philosophy that prompts judges to depart from traditional precedents in favor of progressive and new social principles."
- ✓ The concept of Public Interest Litigation (PIL) is significant when judicial function is discussed.

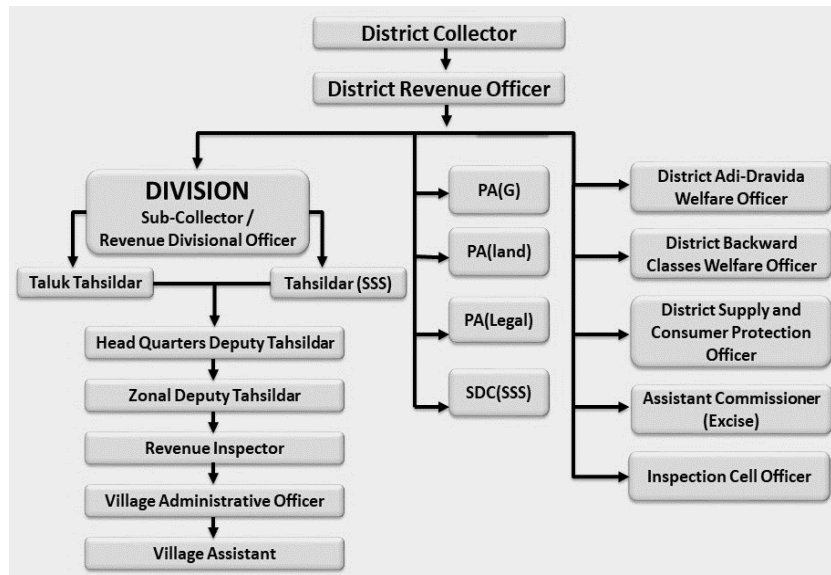
Role of Judiciary in Protection:

- ✓ Judiciary is the custodian of the law of the land.
- ✓ The main function of the judiciary is to protect the rule of law and ensure the rule of law.
- ✓ It protects the rights of individual, settles disputes according to law.
- ✓ To do all this, it is necessary that the Judiciary should not come under any political pressure.

3. தமிழகத்தில் மாவட்ட நிர்வாகம் எவ்வாறு கட்டமைக்கப்பட்டுள்ளது? மற்றும் தமிழகத்தில் மாவட்ட நிர்வாகம் எதிர்கொள்ளும் சவால்களை ஆராய்க.

How district Administration is organized in Tamil Nadu and examine the challenges of district administration in Tamil Nadu.

District Administration in Tamil Nadu and its Challenges:



District collector:

- ✓ Conducts Revenue Court.
- ✓ Arbitration of land acquisition, its assessment and collection of land revenue.
- ✓ Collection of Income Tax Arrears, Excise Duties, Irrigation Arrears and its arrears.
- ✓ Provide different types of legal certificates like SC/ST, OBC & EWC, Domicile, Citizenship, Marriage etc.

District Revenue Officer & Sub Collector:

- ✓ The TRO mainly deals with general administration and is responsible for supervising the day-to-day operations of the Collectorate.

Tahsildar:

- ✓ Supervise and inspect the land records in his taluk as per the provisions contained in the land record manual.
- ✓ To see whether the provisions contained in the “Land Registration Manual” specifying the duties of superintendent kanungos and legpals are being properly executed or not.

Revenue Inspector:

- ✓ The Revenue Inspector is the Administrative Assistant to the Tahsildar.
- ✓ Depending on the area and population of the taluk, each taluk is divided into affluent hoblis.
- ✓ Or each hobli or circle has an R.I. Guided by circles.

Village administrative officer:

- ✓ Main role of VAO is maintenance of village accounts and Asmoish
- ✓ VAO is responsible for collection of land tax, panchayat taxes and other dues.
- ✓ Issuance of Chitta and Inclusion for availing loan from Co-operative Societies and other Banks,
- ✓ He maintains all accounts of cultivation, irrigation etc.

4. இந்தியாவின் நீதித்துறை நிர்வாகத்தின் தன்மை மற்றும் நோக்கம் பற்றி விவாதிக்கவும்.

Discuss the Nature and Scope of Judicial administration India.

- ✓ Although the executive appoints the judges of the High Courts, i.e. the Supreme Court and the High Courts, their tenure is beyond the purview of the executive.
- ✓ Administrators have to follow certain guidelines even in appointing judges. Once appointed, they are not subject to any administrative control in the discharge of their functions.
- ✓ This is done to ensure that the judgments of the courts are impartial and fair.

- ✓ In the Indian Union, courts also play an important role in settling disputes between the Center and the States.
 - ✓ Hence, independence of judiciary is one of the important features of judicial system of India.
 - ✓ The Indian Judiciary runs like a pyramid from the Subordinate Courts and District Courts at the local level to the High Courts for each state to the Supreme Court of India.
 - ✓ The Supreme Court is the head of all courts in India's judiciary.
 - ✓ Comprises the Chief Justice and other judges appointed by the President of India.
 - ✓ Original jurisdiction extends to (a) disputes between the Government of India and one or more states and (b) claims for violation of constitutionally guaranteed fundamental rights.
 - ✓ The High Courts are at the second level of the Judiciary.
 - ✓ Normally each state has one high court, but two or more states may have one high court.
 - ✓ The High Court consists of a Chief Justice and some judges appointed by the President of India.
 - ✓ Original, Appellate and Administrative. Its original jurisdiction includes the power to issue warrants relating to the fundamental rights of citizens.
 - ✓ Administrative Jurisdiction of High Courts, Subordinate Courts, Subordinate Judiciary i.e. Courts at district level and below come into close contact with people in the judiciary.
5. தமிழகத்தில் மாவட்ட வேலைவாய்ப்பு அலுவலகத்தின் பணி மற்றும் பங்களிப்பை விவரிக்க.
Describe the role and functions of district employment office in Tamilnadu.
Important Functions of Employment Office:
- ✓ Registration of job seekers, their appointment against notified vacancies, provision of career guidance to students and unemployed, periodic collection, compilation and preparation of reports on unemployment and underemployment etc.
 - ✓ Registration of information of 10th and 12th passed students.
 - ✓ Registration and updating of details of unemployed youth in the district.
 - ✓ Employment related information exchange.
 - ✓ Coaching students preparing for competitive exams.
 - ✓ Training in Entrepreneurship Development.
 - ✓ Providing job related information only skills development training to students in schools and colleges.
 - ✓ Organizing employment camps at regular intervals.
 - ✓ Coaching for Interviews in order to gain employment opportunities in Government and Private sector.
 - ✓ Preparation of course notes for competitive examination and distribution to the students for the benefit of the students.
 - ✓ Conducting mock practice tests for competitive examination conducted by central and state governments.
6. வளரும் நாடுகளில் தேர்வாணைய முகமைகள் எதிர்கொள்ளும் சவால்களை வரிசைப்படுத்துக.

List out the challenges faced by recruitment agencies in developing countries.

1. Central Staff Selection Board State Staff Selection Board Railway Selection Board various agencies are working in India to select suitable people for government jobs.
2. In order to direct the selection of high-level to shop-level employees required by the central and state governments, these organizations conduct examinations for tens of thousands of posts every year.
3. Through these the activities of Staff Selection Commission play a very important role for smooth running of government work.

Key Challenges Faced:

1. without qualified candidates.
2. Lack of qualified personnel.
3. Delayed selection process.
4. Delay in publication of results.

5. Restrictions on Government Administration.
 6. Additional burden on examination agencies for examinees.
 7. Non-filling of posts.
 8. Hence additional work load.
 9. Privatization of government jobs.
 10. Underfunding.
 11. Limitation of Powers by Constitution.
 12. Intervention of Politicians.
 13. Lateral entry method.
 14. The advice of the Selection Board does not bind the Government.
7. தேசிய ஆட்சேர்ப்பு முகமை என்றால் என்ன? அரசாங்கத்தின் வெவ்வேறு துறைகளில் எவ்வாறு ஆட்சேர்ப்பு செயல்முறையை அதிகரிக்கும்?

What is national recruitment agency? How can speed up recruitment process to various government sectors?

Features:

1. This system brings under one system the various first level examinations conducted for various appointments under the Central Govt.
 2. Various organizations like Central Government Railway Selection Board, Bank Staff Selection Board, (SSC, IBPS, and RRB) conduct the examination for Group B and Group C posts of Govt.
 3. National Examination Agency has been set up considering that the preliminary examination should be conducted as a single public examination for such examinations.
 4. The National Examination Agency conducts the Public First Level Examination twice a year
 5. It will conduct the exam in about 12 languages.
 6. It is to be noted that earlier the examinations were held in Hindi only
 7. The exam will be conducted at around 1000 exam centres across India.
 8. Emphasis will be given to conduct this examination in 117 backward districts of India.
 9. Based on the marks obtained in this examination, the respective examination boards may conduct specific examinations.
 10. It is said to increase the speed of recruitment in the government machinery.
- Its masses are:**
1. The time limit for applying for various exams will be reduced.
 2. Different first level examination conducted for different examinations will come under one examination.
 3. About 7 lakh vacancies identified as vacancies in central government jobs will lead to filling up.
 4. Elections will be conducted with full transparency without any political interference.
 5. It is seen as an important aspect that can reduce wastage of time.
 6. It is said that through this the government machinery will be strengthened and the administration will be innovative.
8. உள்ளாட்சி அரசாங்கத்தில் பெண்களுக்கான இட ஒதுக்கீடு - விவாதிக்க.

Reservation for women in Local Government – Discuss.

1. The 73rd and 74th Constitutional Amendments to the Constitution of India mandated 33 percent reservation for women in rural and urban local bodies established in India.
2. Ensuring at least 33 percent representation in the membership and chairmanships of urban local governments.
3. According to Article 243 of the Constitution, 33 percent seats in local government should be reserved for women.

Benefits:

1. Political representation of women has been ensured through this reservation.
2. The political distinction between men and women has been reduced.
3. Women have the opportunity to participate in politics.
4. It is ensured that women can participate in the development of the society.

Key Challenges:

1. This reservation is not properly followed at various places.
 2. Men take over the responsibility of managing women even if they are reserved.
 3. The political empowerment of women is not fully realized through the reservation given in this as the local governments do not have much power.
 4. 108th Constitutional Amendment Act This was a landmark bill brought in to ensure 33 percent reservation for women in state legislatures and parliaments.
 5. Almost 15 years have passed since this bill was introduced and the bill has not yet been passed.
 6. Such as incomplete reservation means that women's political representation and political empowerment are incomplete.
9. பல்வேறு பட்டஜை பற்றாக்குறை பற்றி விரிவான விளக்கம் தருக.

Give a detailed account on different types of Budget deficits.

A budget deficit means that budgeted revenue is less than expenditure. This condition is also known as government deficit. There are four types of deficits in the budget of the Government of India.

1. Revenue deficit
2. Budget deficit
3. Fiscal deficit
4. Primary deficit

Revenue shortfall:

1. If the revenue expenditure of the government is more than the revenue inflow it is called revenue deficit.
2. It does not take into account capital inflows and capital expenditure.
3. Revenue Deficit means that the revenue is less than what is required to run the day-to-day operations of the government.
4. Revenue Deficit (RD) = Gross Revenue Expenditure (RE) - Gross Revenue Receipts (RR) $RE - RR > 0$

Budget Deficit:

1. Budget deficit is the gap between the total revenue and expenditure of the revenue and capital accounts.
2. Budget Deficit = Total Expenditure – Total Revenue

Fiscal deficit:

1. Fiscal Deficit = Budgetary Deficit – Government's Store Debts and Other Liabilities.
2. So fiscal deficit is more than budget deficit.

Primary deficit:

1. Principal Debt Shortage is the debt shortfall after deducting interest payments from the financial debt shortfall.
 2. It will show the real burden of Govt.
 3. And this does not include interest on previously acquired loans.
 4. Hence primary deficit refers to the demand for government debt especially interest payments.
 5. Hence the fiscal deficit will be higher than the principal deficit.
 6. Principal Debit (PD) = Funding Debit (FD) – Interest Payment (IP)
10. தமிழ்நாடு பட்டஜை 2022 -23 கான சிறப்பு அம்சங்களை வரிசைப்படுத்துக.

List out the Highlights of Tamil Nadu Budget 2022 – 23.

1. Muvalur Ramamirtham Ammaiyar Higher Education Assurance Scheme.
2. According to the scheme, stipend of Rs.1000 per month will be given to girl students who have studied in government school from 6th to 12th standard till graduation.
3. Allocation of funds for translation of Thanthai Periyar's books and works into other languages.
4. New museums in Villupuram and Ramanathapuram districts of Tamil Nadu.
5. Decision to set up Nature Park for children at Guindy Children's Park.
6. Eligible students who have studied from 6th to 12th standard in government schools.

7. Mainly the government will bear the entire cost of education of the students who are enrolled in higher education like Indian Institute of Technology, Indian Institute of Science, All India Institute of Medical Education etc.
8. Special committees will be set up to monitor social media in the state.
9. This is a plan to prevent the spread of fake news.
10. A double decker Elevated Expressway road will be constructed from Maduravoyal to Chennai Port.
11. Destitute animals will be taken care of by the shelter.
12. Tribal Museum to be set up at Courtalam, Tenkasi District.
13. A Museum of Prehistoric Artifacts will be set up at Poondi, Tiruvallur District.
14. A museum of Middle Stones will be set up in Dharmapuri district.
15. Buses operating in major cities in Tamil Nadu will be converted to electric buses.
16. A Coir Industry Development Corporation will be set up at Coimbatore.
17. New industrial parks will be created in districts like secondary cities like Coimbatore Perambalur Madurai, Vellore.
18. Special production units will be created for manufacturing of electronic products.
19. The revenue deficit of the government has been reduced from four to three per cent to about Rs 7000 crore.
20. The debt amount of Tamil Nadu is about 6 lakh 53 thousand crores.
21. The GDP of the state is 27 percent.
22. Deficit will be reduced from four percent to three percent.
23. Department for which Higher funds have been allocated in to the is School Education.

11. நிதி கொள்கை பற்றி விளக்குக.

Illustrate Fiscal Policy.

Exceptions:

“Fiscal policy is the policy of government revenue and expenditure to produce desirable effects on national income and avoid undesirable effects. “Arthur Smithies.

Meaning of Fiscal Policy:

1. Fiscal policy is the main instrument of modern governmental economic policy. Fiscal policy gained importance with Keynes's 'New Economy' and the Great Depression.
2. Fiscal policy in general view is the budget policy that affects economic variables like production, employment, saving and investment.
3. It is a government defining policy.

Financial Instruments:

1. **Taxation:** Taxes transfer income from the people to the government. Taxes can be direct or indirect. A tax increase reduces disposable income. So tax should be increased to control inflation. Taxes should be cut during recessions.
2. **Public Expenditure:** Aggregate demand for goods and services rises when public expenditure increases the wages and salaries of workers. Hence public expenditure helps to control recession and inflation.
3. **Public Credit:** The government transfers money from the public to the government through credit. It is then paid back to the people with interest. Thus money is transferred from the government to the people.

Objectives of fiscal policy:

1. Full employment
2. Affordability

3. Economic development
4. Equitable sharing
5. Currency Exchange Rate Equilibrium
6. Capital formation
7. Equitable development

Fiscal policy helps to achieve the following objectives.

Full Employment:

Full employment is a major objective of both developed and developing countries. Public spending on social reinvestment can generate employment.

Affordability:

Price volatility causes an imbalance between aggregate demand and supply, resulting in inflation as demand for goods increases.

Economic Development:

Fiscal policy is used to increase the productive capacity of an economy. Tax is used as a tool to encourage investment. Tax holidays and tax rebates stimulate investment through new factories.

Equal sharing:

A progressive tax system helps reduce the gap between the rich and the poor.

Currency Exchange Rate Equilibrium:

International trade fluctuates according to the movement of exchange rates. Increases exports by providing tax incentives and subsidies.

Capital formation:

Capital formation becomes very important for rapid economic growth. A reduction in tax burden increases disposable income and leads to capital accumulation through savings.

12. பதினாறாவது நிதிக்குழு பற்றி விளக்குக.

Explain 15th Finance Commission's.

According to Article 280 of the Constitution of India, the Finance Commission is a Constitutional body. It was set up in 1951 to define the fiscal relationship between the Center and the States.

1. The Fiscal Commission seeks to reduce disequilibrium between the Center and the states (vertical disequilibrium) and to reduce disequilibrium between states (horizontal disequilibrium). It promotes intuition.
2. The Finance Commission is constituted once in five years. It is set up two years in advance. This is a temporary arrangement.
3. The 15th Finance Commission was constituted in November 2017. Its recommendations will be implemented from April 1, 2020.
4. Allocation of net tax revenues between the Center and the States and distribution of their respective shares to the States.
5. To lay down the principles regarding the amount of grant to be given by the Central Government to the State (Article 275 (1)) and the eligibility of the State Government to receive the grant.
6. Particulars to be brought to the attention of the President of India for the maintenance of sound finances. Other issues include debt relief, natural disaster funds to states, sub-ordinates etc.
7. It is recommended to maintain the same vertical decentralization at 41% as in the report for the year 2020-21.
8. It will help maintain predictability and stabilize resources, especially in times of Covid.
9. This is about the same size as the divisible pool of 42% recommended by the 14th FC. However, it has made the necessary 1% adjustment due to the conversion of the erstwhile Jammu and Kashmir into the new Union Territories of Ladakh and Jammu and Kashmir.

10. GST 35% of total tax revenue of the Union. GST accounts for about 44% of states' own tax revenue.

11. Gross Tax Revenue:

1. Compared to 2016-17 figures, total tax revenue excluding GST cess collection has decreased by 1.7% points.
2. The impact of this decline was seen in the distribution of taxes to the states.

12. Total tax revenue estimate 2021-26: It is expected to be Rs 135.2 lakh crore, out of which divisible pool is estimated to be Rs 103 lakh crore.

13. Criteria and weightages assigned to horizontal partition:

1. Population: 15%
2. Area: 15%
3. Forest & Ecology: 10%
4. Income margin: 45%
5. Tax and financial initiatives: 2.5%
6. Population Efficiency: 12.5%

14. The Commission has also reintroduced the tax effort criterion to reward financial performance.

13. ஆயுதப்படைகள் (சிறப்பு அதிகாரங்கள்) சட்டம், 1958 - ன் முக்கிய சார் அம்சங்களை வரிசைப்படுத்துக.

List out the major provisions of Armed Forces (Special Powers) Act, 1958.

1. Gives special powers to the armed forces of the Indian Army in areas designated by law as disturbed areas.
2. States where the Armed Forces Special Powers Act is currently in force are Nagaland and Manipur
3. What are the powers of armed forces under ASFPA:
 1. Any suspect may be arrested without a warrant.
 2. Armed forces can search any house without any warrant and search using necessary force.
 3. The armed forces are empowered to prohibit the assembly of five or more persons in an area under this Act.
 4. At times if any suspicious person is spotted, after giving due warning, forces may open fire on disturbing factors.
 5. If a person is a repeat offender and tries to disturb the peace of the area, the armed forces have authority till his death.
 6. If the armed forces suspect that any terrorist or criminal is holed up in any house/building, that site or structure may be destroyed by the forces.
 7. Any vehicle can be stopped and searched.
 8. Legal action is not taken against the armed forces even for their misdeeds.

14. வகுப்புவாத வன்முறையின் பல்வேறு கோட்பாடுகளைப் பற்றி விவாதிக்க.

Discuss the different theories of communal violence.

1. Communalism refers to blind loyalty to one's own communal group – religion, language or caste – rather than to a larger society or the nation as a whole.
2. In its extreme form, communalism manifests itself in hatred of groups perceived as hostile,
3. Eventually leads to violent attacks on other communities.
4. Communalism is an ideology used to fulfill the social, economic and political beliefs of a society or social groups.

Issues related to communalism:

1. It is a threat to national unity.
2. It is a catalyst for political and social tensions in the state.
3. It creates divisions among people, groups of communities or groups of states in the country.
4. It is the rivalry of one religion with beliefs, values etc. against another religion.

5. Active hostility or opposition to the religions and beliefs of others often leads to problems in society.

Types of communalism:

1. Political communalism.
2. Social classism.
3. Economic communalism.

Factors responsible for communal violence:

1. Divisive politics.
2. Economic reasons.
3. Social isolation and economic backwardness.
4. Administrative failure.
5. Psychological factors.
6. Role of Media.
7. Social media.

Theory of Social Barriers:

Conditions leading to collective communal violence:

1. Stress, frustration and different types of crises.
2. Aggressors use violence because they suffer from insecurity and anxiety.
3. The origins of these feelings and concerns of an individual can be traced to social barriers created by oppressive social systems, power elites, as well as the individual's background and upbringing.
4. To irrational and unrealistic approaches to social norms and social institutions.

Theory of Polarization and Cluster Effect:

1. Recently, a new conceptual paradigm has been developed to explain inter-communal violence in India.
2. Based on the three concepts of polarization, fragmentation and cluster. in 'pre-riot', 'riot' and 'post-riot' situations.
3. This paradigm based on facts and group behavior analysis of individuals belonging to different social groups (polarity).

15. மின் ஆளுகையின் அடிப்படைக் கொள்கைகள் மற்றும் சாதகங்களை பட்டியலிடுக.

List out the basic principles and Advantages of e – Governance.

1. E-Governance is defined as the use of Information and Communication Technology (ICT) for delivery of government services, exchange of information, transactions, integration of pre-existing services and information portals.
2. The “e” in e-governance stands for 'electronic'.
3. Department of Electronics was established in 1970,
4. It focused on 'information' and its communication.
5. The National Informatics Center (NIC) established in 1977 introduced the District System Project to computerize all district offices.
6. E-Governance and e-Services together are known as e-Government.
7. E-Governance: Using information technology to improve the government's ability to address the needs of society.
8. E-democracy: Use of information technology to facilitate the ability of all sections of society to participate in state governance.

Advantages of e-governance:

1. Emphasis is placed on transparency, accountability and people's participation.
2. Online Disclosures of Policies,
3. Online Grievance Redressal,
4. This includes e-voting etc.

5. Improves delivery and efficiency of government services.
6. Improving government relations with business and industry.
7. Citizen empowerment through access to information.
8. Efficient government administration.
9. Less corruption in administration.
10. Increased transparency in administration.
11. Greater convenience for citizens and businesses.
12. Cost reduction and revenue growth.
13. Levels the organizational structure (less hierarchical).
14. Reduces paperwork and red-tapism in the administrative process,
15. Resulting in better planning and coordination between different levels of government.
16. Improving relations between public authorities and civil society.

16. தேசிய ஒருமைப்பாட்டில் மத வன்முறையின் தாக்கத்தை விளக்குக.

Illustrate the impact of religious violence on National Integration.

1. India is a diverse country with different ethnic groups, classes, castes, languages and cultural traditions.
2. There are many obstacles to achieving world unity in such a country. National integration is the process of integrating people with different socio-cultural identities (race, ethnicity, language, religion, etc.) into a regional political community.
3. It aims to create national awareness, uniqueness of identity and loyalty.
4. Ideology arising from religious pluralism should be considered as a social threat.
5. Communalism is defined as a tool for political gains in a state, in the presence of different religions.
6. Religious violence is a catalyst for political and social tensions in the state.
7. It creates divisions among people, groups of communities or groups of states in the country.
8. It is the rivalry of one religion with beliefs, values etc. against another religion.
9. Active hostility or opposition to the religions and beliefs of others often leads to problems in society.
10. Two nation theory espoused by Muhammad Ali Jinnah and V.T. Savarkar is flawed, history has proven this.
11. According to JL Nehru, the Hindu Right was the greatest threat to India. This contradicts Sardar Patel's view that left-wing extremism is the biggest threat to India.
12. Although we have had bitter experiences with communal divide, it is widely seen that the people who make up 'India' are largely secular, leading to the peace of nations.

17. 'அடிக்கடி வரும் நகர்ப்புற வெள்ளம் மனிதனால் உருவாக்கப்பட்ட பேரழிவு' - கருத்துரைக்க. மேலும் அதைத் தீர்ப்பதற்கான நடவடிக்கைகளை பரிந்துரைக்கவும்.

'Frequent urban floods are Man Made Disaster' – Comment. Suggest Measures to resolve it.

Urban flooding describes the flooding of land or property within a constructed environment, especially in locations that are more densely inhabited (like cities), as a result of excessive rainfall that exceeds the capacity of drainage systems.

Causes of Urban Flooding:

1. Meteorological Factors: Heavy rainfall, cyclonic storms, and thunderstorms.
2. Hydrological Factors: Overbank flow channel networks, the occurrence of high tides impeding the drainage in coastal cities.
3. Anthropogenic Factors
4. Unplanned Urbanization: Unplanned Urbanization is the key cause of urban flooding construction activity and encroachment on catchment areas, riverbeds, and lakebeds
5. Storm-water Drainage systems
6. Encroachments

7. Climate Change
8. Poor Solid Waste Management System
9. Reducing Seepage
10. Lax Implementation
11. No Community Participation

Notable Urban Flooding Events in India:

1. Chennai in 2018
2. Pune in 2019
3. Mumbai in 2020
4. Hyderabad in 2020

Impacts of Urban Flooding:

1. Impact on Human Life
2. Loss of life & physical injury
3. Increased stress ,psychological trauma
4. Contamination of water supplies leading to diseases
5. A rise in mosquito-borne disease
6. Impact on Economy
7. Damage to buildings, roads, and other infrastructures
8. Disruptions to industrial production
9. Disruptions to utility supplies
10. Impact on heritage or archaeological site
11. Post-disaster rescue and rehabilitation adds to the financial burden of the government
12. Impact on Transport and Communication:
13. Increased traffic congestion, disruption in rail services
14. Disruption in communication- impact on the telephone lines, internet cables
15. Impact on the environment:
16. Loss of tree cover, loss of habitat
17. Impact on animals in the zoo, the prevalence of stray animals

Measures to prevent Urban Flooding:

1. Need for Climate Resilient Infrastructure
2. Early Warning Systems and Communication
3. Design and Management of Urban Drainage System
4. Rainwater Harvesting
5. Conservation of Water Bodies
6. Role of Science and Technology

18. நிலச்சரிவுக்கான காரணங்களை விளக்கவும். தேசிய நிலச்சரிவு இடர் மேலாண்மை உத்தியை விளக்குக.

Elucidate the causes of land slide. Explain National land slide Risk Management Strategy.

1. The movement of a mass of rock, rubble, or dirt down a slope due to gravity is known as a landslide.
2. Landslides are particularly dangerous in areas with steep slopes, such as hilly regions. Landslides include things like earth flow, mass movement, mudflow, rotational slip, and avalanches.

Causes a Landslide:

Deforestation:

1. Landslides due to human intervention is one of the causes of landslides in India. One such is deforestation
2. For example, the Himalayan region has become more vulnerable to landslides due to the indiscriminate cutting of trees.

Shifting Cultivation:

1. Shifting cultivation is common in hilly regions and Northeast areas. Every year, residents burn the forests for cultivation purposes.
2. This deteriorates the quality of topsoil, causing erosion during heavy rainfall. This makes such regions more vulnerable to landslides.

Heavy Rainfall and Earthquakes:

Above 40% of the Kumaon Himalayan region are vulnerable to landslides due to earthquakes.

Mining:

Mining or quarrying remove the vegetation cover and soil gravel. This lowers the groundwater retention capacity. Also, it increases the risk of flooding. Therefore, landslides occur due to loose debris or excess floods during an earthquake and heavy rainfall.

Urbanisation:

1. Increasing population pressure in few regions of India is alarming.
2. National Landslide Risk Management Strategy
 1. Landslide Hazard Zonation
 2. Landslide Monitoring and Early Warning System
 3. Awareness Programmes
 4. Capacity Building and Training of Stakeholders
 5. Preparation of Mountain Zone Regulations and Policies
 6. Stabilisation and Mitigation of Landslide and Creation of Special Purpose Vehicle (SPV) for Landslide Management

19. 'மேக வெடிப்பு' - வரையறுக்க. மேலும் அதற்கான காரணங்களை பகுப்பாய்வு செய்க.

Define 'Cloud Burst' and Analyze the reasons.

1. A cloudburst is an extreme amount of precipitation, sometimes with hail and thunder, which normally lasts no longer than a few minutes but is capable of creating flood conditions.
2. Above 5 cm of rainfall in half an hour is a cloudburst
3. Moisture-carrying air moves up a hilly terrain, forming a vertical column of clouds known as 'cumulonimbus' clouds.
4. Such clouds usually cause rain, thunder and lightning
5. This upward motion of the clouds is known as an orographic lift.
6. Unstable clouds cause an intense rainstorm over a small area after becoming heavy enough and locked in the ridges and valleys between the hills.
7. The cloudburst comes from the upward motion of air.
8. Elevations between 1,000-2,500 metres above sea level.
9. The moisture is usually provided by a low-pressure system
10. The Gangetic plains associated with low level winds flowing in from the east.
11. Sometimes winds flowing in from the north-west also aid the occurrence of cloudbursts.

Climate Change:

1. Climate change will increase the frequency and intensity of cloudbursts in many cities.
2. More cloudbursts are happening in Himalayan region
3. The decadal temperature rise in the Himalayan region is higher than the global rate of rising temperatures.

20. 'பேரிடர் மேலாண்மையில் மாவட்ட நிர்வாகம் முக்கிய பங்கு வகிக்கிறது' - கருத்துரைக்க.

'District Administration plays vital role in Disaster Management' – Comment.

1. Disaster Management Act 2005, every State government shall establish a DDMA for every district in the State

2. Chairperson : The Collector or District Magistrate or Deputy Commissioner
3. Co-Chairperson is the elected representative of the local authority.
4. Tribal Areas, the Chief Executive Member of the district council of autonomous district is the co-chairperson.
5. Not more than seven other members in DDMA.
6. The Disaster Management Committee governed under District Magistrate will formulate village level disaster management plans for concern villages.
7. DDMA makes District Disaster Management Plan and implements the state Disaster Management Plan.
8. 73rd and 74th amendment to the Indian Constitution amendment
9. Amendment provides the Panchayats as the institutions of local self-governance.
10. The role of the Panchayati Raj Institutions (PRIs) in both disaster risk reduction and post-disaster management is very significant.

Disasters at Grass-root Level:

1. The panchayats will response at the grass- root level in the case of natural calamities.
2. Effective and Strong PRI- working with the state government, will help tackle the disaster through early warning systems.

Ensuring Better Relief Operations:

1. Local bodies being nearer to the people better position to undertake relief tasks they are more familiar to the requirements of the local people.
2. This ensures total transparency in working and usage of funds as in every disaster situation.
3. Civic services, providing shelter and medical assistance to affected people etc.

Spreading Awareness and Cooperation:

1. Local government institutions have grass root level contact with people they can help effectively in spreading awareness and ensure people's participation in fighting the crisis.
2. NGOs and other agency's participation in the rescue and relief operations.

21. மாநில தகவல் ஆணையத்தின் கட்டமைப்பு, பங்கு மற்றும் செயல்பாடுகளை விவரிக்க.

Explain the Structure, Role and functions of State Information Commission.

1. The Right to Information Act, 2005 provides for the creation of State Information Commission.
2. The State Information Commission will be constituted by the State Government.
3. It will have one State Chief Information Commissioner (SCIC) and not more than 10 State Information Commissioners (SIC).
4. Appointment - Governor.
5. Composition of State Information Commission
6. On the recommendation of the committee
7. Chief Minister
8. The Leader of the Opposition in the Legislative Assembly and a State Cabinet Minister nominated by the Chief Minister.
9. Person of eminence in public life
10. Not hold any other office of profit
11. Connected with any political party
12. Carrying on any business or pursuing any profession.
13. Tenure and Service
14. The State Chief Information Commissioner and a State Information Commissioner hold office for a term prescribed by central government(RTI ACT Amendment 2019)
15. They are not eligible for reappointment.

Powers and Functions:

1. The commission submits an annual report to the state government
2. The state government places this report before the state legislature.
3. The commission can order inquiry into any matter if there are reasonable grounds.
4. The commission has the power to secure compliance of its decisions from the public authority.
5. It is the duty of the commission to receive and inquire into a complaint from any person
6. During the inquiry of a complaint, the commission may examine any record which is under the control of the public authority and no such record may be withheld from it on any grounds.
7. The commission has the power of the civil court
8. Requiring the discovery and production of documents
9. Issuing summons for examination of witnesses or documents and any other matter which may be prescribed
10. Summoning and enforcing attendance of persons
11. Compelling them to give oral or written evidence on oath and to produce documents or things.
12. Receiving evidence on affidavit.
13. Requisitioning any public record from any court or office.
14. When a public authority does not conform to the provisions of this act, the commission may impose penalty.

22. சுகாதார செயல்திறன் - மாநில சுகாதார குறியீடு, 2022 தொடர்பான NITI ஆயோக் கண்டறிந்த சுகாதாரம் தொடர்பான காரணிகளை பட்டியலிடுக.

List out the findings of NITI Aayog related to Health Performance - State Health Index, 2022.

1. Developed By -NITI Aayog
2. Assistance from the World Bank and consultation with the Ministry of Health and Family Welfare (MoHFW).
3. Annual index to assess the performance of states and UTs
4. Published since 2017.
5. Based on 24 indicators
6. Parameters
7. Neonatal mortality rate,
8. Under-5 mortality rate,
9. Sex ratio at birth.
10. Institutional deliveries
11. Average occupancy of senior officers in key posts earmarked for health.
12. Functional medical facilities
13. Birth and death registration
14. Tuberculosis treatment success rate.

Focus of the Fourth Edition:

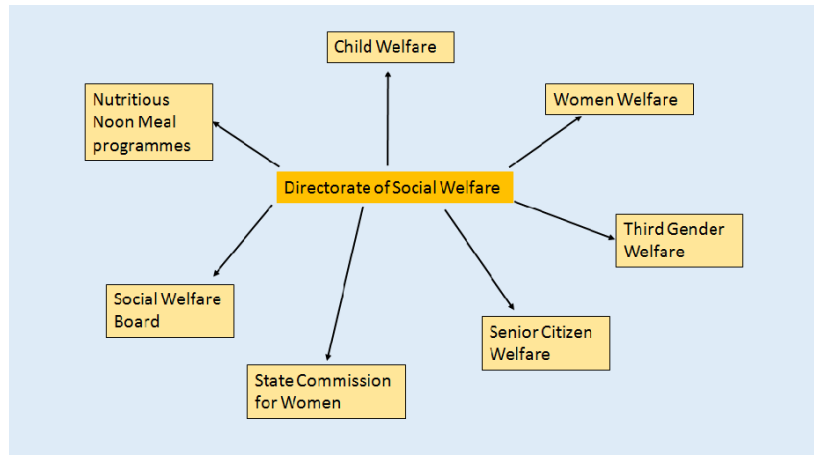
States and UTs over the period 2018–19 to 2019–20.

Ranking of States:

1. Larger States, Kerala, Punjab and Tamil Nadu ranked on top in terms of overall performance
2. Smaller States – Among Smaller States, Mizoram ranked first followed by Manipur on overall performance
3. UTs – Among UTs, Lakshadweep showed best overall performance as well as the highest annual incremental performance.

23. தமிழ்நாடு சமூக நல இயக்குநரகத்தின் கட்டமைப்பு மற்றும் செயல்பாடுகள் பற்றி எழுதுக.

Write about the structure and functions of Directorate of Social Welfare, Tamil Nadu.



1. Social Welfare and Women Empowerment Department
2. Implementing various welfare schemes for the overall welfare and development
3. Children, women, senior citizens and transgender covering their nutrition, safety, socio-economic security, etc.

Welfare Schemes and functions:

1. Marriage Assistance,
2. Girl Child Protection,
3. Nutritious Meal Programme
4. Supply of Uniforms to School Children
5. To protect the destitute, deserted women, young girls rescued from child marriage, Service Homes are established in seven districts.
6. 28 Working Women Hostels
7. In order to give self employment, economic independence to women,
8. 98 Women Tailoring Industrial Co-operative Societies
9. One Transgender Tailoring Society are established.
10. Senior Citizens and Transgender are also benefited by various welfare schemes.

Moovalur Ramamirtham Ammaiyar Higher Education Assurance Scheme:

1. Under PuratchiThalaivar MGR Nutritious Meal programme,
2. Hot, nutritious variety and tasty food.
3. In Integrated Child Development Services, the children from birth to 6 years, the pregnant and lactating mothers are also provided nutritious food and health education.

Implementing various Social legislations:

1. Immoral Traffic (Prevention) Act,1956,
2. Dowry Prohibition Act,1961,
3. Protection of Women from Domestic Violence Act,2005,
4. Commission for Protection of Child Right Act, 2005
5. Prohibition of Child Marriage Act, 2006,
6. Maintenance and Welfare of Parents and Senior Citizens Act,2007,
7. Protection of Children from Sexual Offences Act,2012 (POCSO),
8. Protection of Women from Sexual Harassment at Workplace Act,2013,
9. Tamil Nadu Hostels and Homes for Women and Children (Regulations) Act,2014
10. Juvenile Justice (Care and Protection of Children) Act, 2015 are implemented and monitored by the Department of Social Welfare and Women Empowerment.

24. இந்தியாவில் மத்திய-மாநில சட்டமன்றம் சார்ந்த உறவுகளை விளக்குக.

Explain Centre-State legislative relations in India.

Legislative Relations between Center and States:

1. The Indian Constitution divides the legislative power between the federal government and the states with regard to both the territory and the subjects of legislation, much like any other federal constitution.
2. Four aspects in the Centre states legislative relations.
3. Territorial extent of Central and state legislation.
4. Distribution of legislative subjects.
5. Parliamentary legislation in the state field, and
6. Centre's control over state legislation.

Territorial extent of Central and State Legislation:

1. The parliament can make laws for the whole or any part of the territory of India.
2. A state legislature can make laws for the whole or any part of the state territory.
3. The Parliament alone can make extraterritorial legislations. Thus, the laws of the parliament are also applicable to Indian citizens and their property outside India.
4. The constitution imposes certain restrictions on the plenary territorial jurisdiction of the parliament.
5. The president can make regulations for the peace, progress and good government of the four Union territories- Andaman and Nicobar, Lakshadweep, Dadra and Nagar Haveli and Daman and Diu and Ladakh.
6. The governor is empowered to direct that an act of parliament does not apply to a scheduled area in their state.

Distribution of Legislative Subjects:

1. Under Article 246, a three-tier arrangement has been made in the Constitution regarding the division of legislative subjects between the Center and the States. Which is kept in the Seventh Schedule. There are three types of lists- Union list, State list and Concurrent list.
2. The Parliament has exclusive powers to make laws with respect to any of the matters in 100 subjects.
3. The state legislature power to make laws on 66 subjects.
4. Both the Parliament and the State Legislature can make laws regarding the Concurrent List. At this time 52 subjects in this list were originally only 47 subjects in it.
5. The power to make laws with respect to residuary subjects is vested in the parliament.

Parliament Legislations in the State field:

1. When the Rajya Sabha passes a resolution
2. During a national emergency
3. When states make a request
4. To implement international agreement
5. During president's rule

Centre's Control over State Legislation:

1. The Governor can reserve certain types of state bills for the recommendation of the President.
2. Such as Bills restricting freedom of trade and commerce.
3. In financial emergency, the President can order to preserve money or finance bills passed by the Legislature.

25. ஒப்பளிக்கப்பட்ட சட்டமியற்றும் அதிகாரம் வரையறுத்து மேலும் அதன் முக்கியத்துவம் மற்றும் வரம்புகளைப் பற்றி விவாதிக்க.

Define Delegated legislation and Discuss about its significance and Limitations.

1. Parliament routinely delegates certain functions to authorities established by law since every aspect cannot be dealt with directly by the lawmakers themselves.
2. Empowering the Executive to make subordinate legislation.
3. This delegation of powers is noted in statutes, which are commonly referred to as delegated legislation.
4. The delegated legislation would specify operational details, giving power to those executing the details.
5. Regulations and by-laws under the legislation are classic examples of delegated legislation.

Significance:

1. Allows flexibility and adaptability in the law-making process.
2. Delegating certain powers, the legislature can respond more quickly and efficiently to changing circumstances and emerging issues.
3. Extra skills, experience, and knowledge is suitable suitable for making law.

Limitations:

1. It can lead to a lack of accountability
 2. Lack of Transparency
 3. Laws made by executive agencies/administrative bodies are not subjected to the same level of public scrutiny and debate as laws made by legislature.
 4. Concentration of power in the executive
 5. Administrative branches of government
 6. Against separation of powers.
26. “வாழ்ந்து காட்டுவோம் திட்டம்” பற்றி குறிப்பெழுதுக.

Write a note on "Vazhdhu Kaattuvom Project".

1. The Project management and implementation is governed by Tamil Nadu Rural Transformation Society (TNRTS) formed under the Department of Rural.
2. At the district level, the District Rural Transformation Societies (District Society) were formed under the Chairmanship of District Collector, to guide and facilitate the implementation of the project.
3. The Governing Body (GB) and Executive Committees (EC) of the TNRTS will provide guidance on policy level decisions, coordination and direction to the SPMU Team.
4. The Project will be implemented through the State, District and Block level Project Management units.
5. Vaazhdhu Kaattuvom Project (Vaazhdhu Kaattuvom Project) is an innovative World Bank assisted project that aims at rural transformation through strategies.

Focus:

1. Poverty alleviation by building sustainability and prosperity of rural communities.
2. Enterprise promotion.
3. Access to finance.
4. Employment opportunities.
5. Vaazhdhu Kaattuvom Project is built on existing institutional capital and investments made by Tamil Nadu Pudhu Vaazhvu Project (TNPVP), Tamil Nadu State Rural Livelihoods Mission (TNSRLM) and National Rural Livelihoods Project (NRLP).

27. சமூக மேம்பாட்டுத் திட்டத்தின் நோக்கம், அணுகுமுறை மற்றும் முக்கியத்துவம் குறித்து விவரிக்க மற்றும் தேசிய விரிவாக்க சேவைகளை விளக்குக.

Describe the Aim, Approach, and Importance of Community Development Programme and Explain National Extension Services.

Community development programme:

1. Launched on October 2nd 1952 by the planning commission.
2. It is an attempt made to bring and initiate economic and social transformation in the lives of villagers with the help of their efforts.
3. The programme for community development indicates only those economic and social reconstruction projects in the villages that are implemented with the help of the cooperation of the people.
4. Can initiate the economic and social life transformation of the rural areas.
5. It is a project for community development that is controlled by the community.
6. In this programme, the community is referred to only the villages.
7. The aims for this programme were explained in 1973 and was laid down by the Indian Government. The community development programme started in 1952 and was launched on October 2nd 1952.
8. The major aim of this programme was to bring an integrated development in the rural society that covers all the aspects of the life of people.
9. Role in agricultural expansion
10. Development of Human Resources
11. Organisation of development administration:
12. Health services
13. Motivation of people towards nation building:
14. Growth of national economy
15. Increase in standard of living
16. National Extension Service
17. The National Extension Service is a permanent organization and will cover the whole country.
18. It provides the basic organization, official, non-official and a minimum financial provision for development.
19. National Extension Service blocks in which successful results have been achieved with the maximum popular co-operation are selected for intensive development for a period of three years.
20. This intensive development will depend on the available financial resources and local support and local support and enthusiasm.
21. It represents on an average 100 villages, with a population of 60,000 to 70,000 persons spread over an area of 150 to 170 square miles.

28. சேதுசமுத்திரம் கால்வாய் திட்டம் குறித்து குறிப்பு தருக.

Give an account on Sethusamudram shipping canal project.

Sethusamudram Shipping Canal Project:

1. It is a proposed project to create a shipping route in the shallow straits between India and Sri Lanka.
2. This would provide a continuously navigable sea route around the Indian Peninsula.
3. The channel would be dredged in the Sethusamudram sea between Tamil Nadu and Sri Lanka
4. The project involves digging a 44.9-nautical-mile (51.7 mi; 83.2 km) long deepwater channel linking the shallow Palk Strait with the Gulf of Mannar.

5. The time savings for ships sailing from Kanyakumari or Tuticorin is between 10 and 30 hours.
6. Ships from destinations in the Middle East, Africa, Mauritius and Europe,
7. Save an average of 8 hours using the canal.
8. At the present tariff rates, ships from Africa and Europe will lose US\$4,992 on every voyage because the savings in time for these ships.
9. The canal is designed for ships of 30,000 metric tonnes and lighter.
10. Most new ships weighing more than 60,000 tonnes.

29. சமூக மேம்பாட்டில் நிதி ஆயோக்கின் பங்கினை விளக்குக.

Elucidate the role of Niti Aayog in Social Development.

1. Planning Commission was replaced by a new institution – NITI Aayog on 1st January, 2015 with emphasis on ‘Bottom –Up’ approach to envisage.
2. The Vision of Maximum Governance, Minimum Government, echoing the spirit of ‘Cooperative Federalism’.

Social Inclusion Groups:

1. To ensure the empowerment of SCs, NT, SNT and DNTs, and OBCs, and welfare of EBCs, STs, and minorities.
2. Monitor and evaluate all policies and programmes of the Centre and States/UTs with respect to the above groups.
3. Undertake field visits to get first-hand information on policy implications and development deficits in the sector.
4. Identify priority areas/new strategies for inclusive development of the underprivileged among these groups, including the provision of Special Central Assistance.
5. Monitor the Integrated Tribal Development Programme and scheduled areas and tribal areas and tribal backward regions programmes and the development of Left-Wing-Extremism-Affected Tribal Areas.

Social Defence Groups:

1. In order to ensure the welfare and empowerment of PwDs, protect and ensure the welfare of the Aged/Senior Citizens, rehabilitate and resettle Victims of Substance Abuse (Drug Addicts), empower Transgenders, and ensure the welfare and rehabilitate Destitutes and Beggars.
2. Strengthen the functions of the National Handicapped Finance and Development Corporation, and national trusts and institutions for persons with disability.
3. Periodically monitor and evaluate all policies and programmes being implemented in the sector.
4. Undertake field visits to get first-hand information on policy implications and development deficits in the sector.
5. Identify priority areas/new strategies for the inclusive development of the underprivileged among these groups.

30. ‘முதலமைச்சர் அரசாங்கத்தின் தலைவர்’ - விமர்சன ரீதியாக பகுப்பாய்வு செய்க.

‘Chief Minister is the head of the government’ - Critically Analyse.

1. Article 164 of the Constitution provides the Chief Minister shall be appointed by the governor.
2. A leader of the party that has got the majority share of votes in the assembly elections, is appointed as the Chief Minister of the state.
3. The Governor is the nominal executive authority
4. The real executive authority rests with the Chief Minister

Power and Functions:

1. The Chief Minister is the head of the Council of Ministers of his State.
 2. The Chief Minister plays an important role in the administration of the State.
 3. The Governor allocates portfolios to the ministers on the advice of the Chief Minister.
 4. The Chief Minister presides over the Cabinet meetings.
 5. Coordinates the functioning of different ministries.
 6. Guides the functioning of the Cabinet.
 7. Framing the laws and policies of the State Government.
 8. Bills are introduced by the ministers in the State legislature with her approval.
 9. Chief spokesman of the policies of his government both inside and outside the State Legislature
 10. Article 167, the Chief Minister is the sole link of communication between the Cabinet and the Governor.
 11. Constitution provides that the Chief Minister shall communicate to the Governor all decisions of the Council of Ministers relating to the administration and the affairs of the State and proposals for legislation.
31. மாவட்ட நிர்வாகத்தில் வருவாய் ஆய்வாளரின் பணிகள் மற்றும் பொறுப்புகளை விளக்குக.

Explain the roles and responsibilities of Revenue Inspector in District Administration.**Roles and responsibilities:**

1. Each Taluk is divided into firkas comprising of group of villages
 2. Revenue Inspector plays a vital role in land revenue collection
 3. Supervising the work of Village Administrative Officers. Revenue inspector oversees the block of villages
 4. Responsible for collecting Land tax, Panchayat Taxes and other dues.
 5. Responsible and maintain peace in Village, he should inform any violence, unnatural death, caste fight, encroachment, Natural calamities, etc to the Higher Officials.
 6. Issuing Chitta and Adangal for obtaining loan from Co-Operative Societies and other banks,
 7. Responsible to issue various certificates like caste certificate, income certificate etc.
 8. Issuing Certificate to farmers for various loan
 9. Inspecting various land records
 10. Responsible for re-locate the people
 11. Providing amenities during natural calamities
 12. He Maintains all the accounts relating to cultivation, irrigation etc.
32. ஆதார் (திருத்த) சட்டம் - 2019 ன் முக்கிய அம்சங்களைப் பட்டியலிடுக.

List out the salient features of Aadhar (Amendment) Act 2019.

1. Provides for voluntary use of Aadhaar number in physical or electronic form by authentication
2. Offline verification with the consent of Aadhaar number holder.
3. Use of twelve-digit Aadhaar number and its alternative virtual identity
4. Gives an option to children who are Aadhaar number holders to cancel their Aadhaar number on attaining the age of eighteen years.
5. Permits the organization to perform authentication only when they are compliant with the standards of privacy and security specified by the Authority
6. The authentication is permitted under any law made by Parliament or is prescribed to be in the interest of State by the Central Government.

7. Allows the use of Aadhaar number for authentication on voluntary basis as acceptable KYC document under the Telegraph Act, 1885 and the Prevention of Money-laundering Act, 2002.
 8. Prevents denial of services for refusing to give Aadhaar number
 9. Authentication Provides for establishment of Unique Identification Authority of India Fund.
 10. Provides for civil penalties
 11. Its adjudication, appeal with regards with violations of Aadhaar Act
33. இந்திய அரசியலமைப்பின் கீழ் உத்தரவாதம் அளிக்கப்பட்டுள்ள அடிப்படை உரிமைகளை அமலாக்குவதற்கு என்னென்ன தீர்வுகள் உள்ளன?

What are the remedies available for the enforcement of fundamental rights guaranteed under constitution of India?

1. Five different writ types
2. **Supreme Court under Article 32**
3. **High court under Article 226**

Habeas Corpus:

1. Writ under the right to constitutional remedies is enforced to protect fundamental rights.
2. It protects the liberty of Indian citizens from any unlawful detention.
3. Arresting is unlawful, this writ can help.

Mandamus:

1. The Mandamus writ (WE COMMAND) is also issued by the High Court or the Supreme Court under the right to constitutional remedies.
2. The court issues this writ to identify if the officeholder is not their legal duty
3. It also checks if the person is prohibiting any rights of the individual.

Prohibition:

1. Both the Supreme Court and High Court can issue this writ.
2. It is mainly applicable when the case in the lower court surpasses its jurisdiction. Hence, it can be issued only against quasi-judicial and judicial authorities.

Certiorari:

1. The court orders a lower court or authority for transferring the pending case.
2. The case is transferred to a higher court or authority.
3. The Certiorari writ is issued against quasi-judicial and judicial authorities.
4. It is not available against private and legislative bodies.

Quo Warranto:

1. “By what warrant or authority.”
2. The court issues the writ for enquiring about the legality of the claim.
3. It is legally made by the person to the public office.
4. Preventing any illegal usurpation of the public office.

34. MSME என்றால் என்ன? இந்தியாவில் MSME துறை எதிர்கொள்ளும் முக்கிய சவால்கள் யாவை?

What is MSME? What are the major challenges faced by MSME sector in India?

Investment in Plant and Machinery or Equipment

Micro enterprises:

1. Not more than Rs.1 crore and
2. Annual Turnover not more than Rs. 5 crore Investment in Plant and Machinery or Equipment

Small enterprises:

Not more than Rs.10 crore and Annual Turnover not more than Rs. 50 crore

Medium enterprises:

1. Investment in Plant and Machinery or Equipment:
2. Not more than Rs.50 crore and
3. Annual Turnover not more than Rs. 250 crore

Importance:

1. Second largest employment generating
2. Provides employment to around 120 million persons in India.
3. Access to credit
4. Poor infrastructure
5. Lack of modern technology
6. Access to market
7. Lack of skilled manpower
8. Low standardization of products
9. Low market penetration
10. Lack of regulatory
11. Export constraints

35. பேரிடர் மேலாண்மையில் பஞ்சாயத் ராஜ் நிறுவனத்தின் முக்கியத்துவம் மற்றும் அவை எதிர்கொள்ளும் சவால்களைப் பற்றி விவாதிக்கவும்.

Discuss the significance and Challenges of the Panjayat Raj Institution with respect Disaster management.

1. Disaster Management at Grassroots Level: Decentralization of powers and responsibilities to Panchayats.
 2. Enables flexible and resilient grassroots response during natural disasters.
 3. Effective and strong Panchayat Raj Institutions, functioning in harmony with the State Govt.
 4. Helps to deal with disaster through early warning systems.
 5. Ensuring better relief measures: Local bodies are closer to the people.
 6. Being well aware of the needs of the local people are in a better position to carry out relief work.
 7. It ensures complete transparency in the working and utilization of funds in every disaster situation.
 8. They can also be relied upon for day-to-day running of civic services, providing shelter and medical assistance to affected people.
 9. Spreading awareness and garnering cooperation: Local bodies have grassroots contact with people.
 10. And they will effectively help in spreading awareness and ensuring people's participation in fighting the crisis.
 11. They are also excellent channels for participation of NGOs and other organizations in rescue and relief operations.
 12. Organized local surveillance systems: Maintain strict vigilance in quarantine centers and monitor for symptoms in households.
 13. Panchayat Raj institutions will organize community-based monitoring systems involving village elders, youth and self-help groups (SHGs).
36. இந்தியாவில் நகர்ப்புற உள்ளாட்சிகள் எதிர்கொள்ளும் சவால்களைப் பற்றி விவாதித்து அதற்கான தீர்வுகளை பரிந்துரைக்கவும்.

Discuss the challenges faced by urban local government in India and suggest remedies.

Approach of State Governments:

1. State governments have given only a small number of taxes to urban local bodies.
2. Elections to urban local bodies have also been delayed citing many problems of the government. Eg:

Tamil Nadu

Politicization of Urban Local Government:

They are seen as mere platforms for political mobilization rather than effective tools for ensuring development.

Distribution of Powers:

1. Their powers are being usurped by the growing number of special purpose agencies in the country.
2. Meaningful devolution on the basis of functions, tax collection powers is yet to be achieved.

Poor cost recovery of urban local bodies services:

In India, user charges and service delivery seem to be caught in a vicious cycle of poor quality services, resulting in unwillingness to pay for these and poor collection of user charges and fees.

Improper maintenance of accounts:

The CAG reports on local governments pointed out several deficiencies in the preparation of municipal accounts related to budgeting, accuracy, updating and timely submission of accounts by urban local governments.

Disadvantages of State Finance Commissions:

1. Inefficient functioning of State Finance Commissions has hampered the ability of urban local bodies to mobilize financial resources.
2. Recommendations of State Finance Commissions are mostly ad hoc and not based on sound public finance policies.

Impact due to introduction of GST:

Introduction of GST has taken away important sources of tax revenue like octroi, local tax, entry tax and advertisement tax for urban local bodies without any compensation.

Existence of many bodies:

1. At the state level, there is less coordination between bureaucracy-led agencies such as development authorities; They also have overlapping functions.
2. This led to fragmented management and thus lack of coordination in finance and expenditure.

Procedures:

1. Public-Private Partnership, Mumbai: “Gitanjali Industries” in Mumbai with Public-Private reference is an example to follow.
2. Partnership is like privately owned, it works cooperatively with Greater Mumbai Corporation for recycling of dry waste.
3. Traffic Information System, Bengaluru: The MapUnit Information System is developed to meet the needs of the growing population.
4. Development of a network in the city, which is managed and controlled by technology.

37. மின்சார திருத்த மசோதா, 2022. கூர்ந்து ஆராய்க.

Critically examine the Electricity (Amendment) Bill, 2022.

Electricity Amendment Bill, 2022:

The Electricity Amendment Bill, 2022 aims to provide open access to the distribution networks of electricity suppliers to many players and allow consumers to choose any service provider.

The Bill seeks to amend the Electricity Act 2003 to:

- 1) Under non-discriminatory “open access” rules with the aim of facilitating the use of distribution networks by all licensees, enabling competition, improving efficiency of distribution licensees and improving services to consumers and ensuring sustainability of the electricity sector.
- 2) Facilitating non-discriminatory open access to the distribution network of the distribution licensee.
- 3) To make provision as per standard revision in one year apart from mandatorily fixing maximum

ceiling and minimum charges by the appropriate commission.

4) Changing the rate of punishment from imprisonment or fine to fine.

5) To strengthen the functions discharged by the Regulators.

Arguments against the Bill:

1) 'Electricity' is enumerated in Clause 38 of List III of the Seventh Schedule of the Constitution, so the Central and State Governments are empowered to make laws on the subject.

2) The federal philosophy of Indian polity, which is part of the 'basic structure' of the Constitution of India, is violated by the proposed amendments.

3) Electricity for farmers and people below the poverty line will eventually disappear.

4) Only government discoms or distribution companies have universal power supply obligations.

5) Therefore, private licensees will prefer to supply electricity in profitable areas - industrial and commercial consumers.

6) If this happens, the profit making areas will be taken away from government discoms and they will become loss making enterprises.

38. தமிழகத்தில் தொழில் வளர்ச்சி மற்றும் விரிவாக்கத்திற்கு திறவுகோலாக செயல்படும் முகமைகளின் செயல்பாடுகளை விவரிக்க.

Elucidate the role of agencies that have played a key role in industrial development and expansion in Tamilnadu.

1) Tamil Nadu Industrial Investment Corporation Limited (TIC - Tamil Nadu Industrial Investment Corporation Ltd) 1949.

2) Tamil Nadu Industry Investment Corporation provides limited financial assistance for establishment of new industries and expansion of existing industries. It helps all types of businesses but especially 90% of micro, small and medium enterprises.

3) Tamil Nadu Industrial Development Corporation (TIDCO) 1965.

4) It is another government agency which helps to establish industrial parks and develop industries in our state.

5) Tamil Nadu Small Industries Corporation (TANSI - Tamil Nadu Small Industries Corporation Ltd) 1965.

6) In 1965, the Tamil Nadu Small Industries Corporation (TANSI) took charge of the small scale industries established and implemented in the organizational sector by industrial and commercial enterprises. It was the first industrial institute established for small enterprises.

7) Tamil Nadu Small Industries Development Corporation (TANSIDCO) 1970.

8) Tamil Nadu State Small Industries Development Corporation (TANSIDCO) is a government agency established in 1970 by the Government of Tamil Nadu for the development of small scale industries in our state. The agency also provides grants and technical assistance to start-ups in the small scale industry sector.

9) State Industries Promotion Corporation of Tamil Nadu (SIPCOT - State Industries Promotion Corporation of Tamil Nadu), 1971.

10) Tamil Nadu Government Industrial Development Corporation (Sipcot) was established in 1971 for industrial development and set up industrial estates.

11) Tamil Nadu Industry Guidance Bureau (Guidance Bureau) Investors Guidance.

39. இந்தியாவில் தமிழகம் தகவல் தொழில்நுட்பத் துறையில் ஓர் முன்னோடி- காரணங்களை ஆராய்க.

Tamilnadu is the Pioneer in Information Technology industry in India- Analyse the reasons.

1) Tamil Nadu was one of the first states in India to develop a comprehensive IT policy.

2) As early as 1997, the State Government released an Industrial Policy for the Information Technology Sector to achieve the targets set out in the Ninth Five Year Plan.

3) Focus on IT sector as an engine of development of the state.

- 4) However, the pace of change in the IT industry necessitated a re-examination of this plan. In 2002, the Government of Tamil Nadu released a new Information Technology Policy, which aimed to bring prosperity to the state and make Tamil Nadu a knowledge-empowered state.
- 5) The advent of the Internet has turned the world into a global village and ushered in an era of global provision of IT-based services.
- 6) This revolution will create more than four million jobs in the knowledge sector (IT and ITES industries).
- 7) Tamil Nadu is uniquely poised to exploit this great opportunity because of its educated workforce and good governance.
- 8) Government of Tamil Nadu released ITES Policy in 2005 to highlight the benefits of ITES investment in Tamil Nadu.
- 9) Following this the ICT Policy 2018 was released by the Govt to keep up with the pace of change in the IT sector.
- 10) Quality Higher Education Institutions.
- 11) Optimum framework for IT development by ELCOT company.
- 12) State with most IT Parks. Example: (TIDEL Park, Chennai)



TAMIL NADU The Global IT Destination IT / ITeS Exports



Rs. in Cr.



* Source from STPI and MEPZ

40. ஏதேனும் இரண்டிற்கு விடை அளிக்க. Attempt Any two

i. டெல்லி - மும்பை தொழில்துறை வழித்தடம்.

Delhi – Mumbai Industrial Corridor.

Delhi-Mumbai Industrial Corridor (DMIC)

- 1) Includes Uttar Pradesh, Haryana, Rajasthan, Madhya Pradesh, Gujarat and Maharashtra.
- 2) The route covers a length of 1483 km between India's political capital Delhi and commercial capital Mumbai.
- 3) The USD 100 billion project is being financed through Japan Investment Receipts from the Government of India, Japanese companies' investments and loans from Indian companies.
- 4) The DMIC project aims to develop industrial cities of the future by promoting "High Speed - High Capacity" connectivity provided by Western Dedicated Freight Corridors.

ii. பெங்களூர் - மும்பை தொழில்துறை வழித்தடம்.

Bangalore – Mumbai Industrial Corridor.

- 1) Includes Maharashtra and Karnataka.
- 2) It is developed with the help of Britain (UK).
- 3) Delhi Mumbai Industrial Corridor Development Corporation (DMICD) and UK Trade and Investment (UKTI) have been decided as nodal agencies on Indian and UK side respectively.

iii. பாதுகாப்பு தொழில்துறை வழித்தடம்.**Defence Industrial Corridor.**

Currently, two defence industrial corridors are being developed in India, one in Uttar Pradesh and the other in Tamil Nadu. Many private companies will join hands with the Indian government to achieve the country's vision of self-reliance in defence.

Uttar Pradesh Defense Industrial Corridor:

- 1) Uttar Pradesh Defense Industrial Corridor is being developed by Uttar Pradesh Expressway Industrial Development Authority or UPEIDA.
- 2) A total of 196.7853 hectares of land has been acquired in Uttar Pradesh for development of Uttar Pradesh Defense Industrial Corridor.

Tamil Nadu Defense Industrial Corridor:

- 1) The Tamil Nadu Corridor is being developed by the Tamil Nadu State Government (TIDCO).
- 2) A total of 283.28 hectares of land has been acquired in Tamil Nadu for development of Tamil Nadu Defense Industrial Corridor.
- 3) It covers the district of Chennai, Coimbatore, Hosur, Salem and Trichy.

41. மத்திய புலனாய்வு ஆணையத்தின் (CVC) அமைப்பு, பணிகள் மற்றும் பொறுப்புகள் குறித்து எழுதுக.

Write a note on Central vigilance commission's (CVC) structure, functions and responsibilities.

Appearance:

- 1) Nomination – Santhanam Group
- 2) Central Govt Administrative Resolution - 1964
- 3) Statutory status obtained in 2003, (Central Corruption Vigilance Commission Act, 2003)
- 4) Purpose – System to prevent corruption in government public works

System:

- 1) Chairman – 1
- 2) Members – 2
- 3) Appointment – President
- 4) Tenure – 4 years /65 years, whichever is earlier.
- 5) Headquarters - New Delhi
- 6) Pay (M) Concession – Affiliated to UPSC

Selection Committee:

- 1) Prime Minister
- 2) Leader of Opposition
- 3) Home Minister

Duties and Responsibilities:

- 1) Investigating allegations of corruption against public servants.
- 2) Expediting and finalizing investigations into corruption complaints.
- 3) Receiving reports from investigative agencies and supervising and streamlining their anti-corruption activities.
- 4) Taking over corruption cases for further action.
- 5) Revise anti-corruption laws and procedures to ensure integrity in public administration.
- 6) Submitting an annual report on the activities of the Commission to the Ministry of Home Affairs.

- 7) CVC has identified and listed 27 types of corruption.
- 8) Any authorities under the Prevention of Corruption Act 1988 shall conduct an inquiry against.
- 9) These have the jurisdiction of the Civil Court.

42. ஊழலை ஒழிப்பதில் நீதித்துறையின் பங்களிப்பு குறித்து கூர்ந்து ஆராய்க.

Critically examine the role of judiciary in eradication of corruption.

- 1) Judiciary plays an important role in eradicating corruption
- 2) Constitution which gave unlimited powers to the Judiciary through Articles 226 (High Court) and 32 (Supreme Court) which were exercised by the Judiciary in the interest of the people.
- 3) According to Section 3 of the Prevention of Corruption Act, 1988, the trial of cases under the Prevention of Corruption Act, 1988 shall be decided only by Judges designated as "Special Judges".
- 4) Corruption has been identified as the foundation of major challenges and economic woes facing the nation in recent times.
- 5) If the Judiciary is corrupt, then there will be no such thing.
- 6) Judicial corruption affects the unwarranted access and outcomes of the judiciary.
- 7) Results will be unfair and unpredictable and consequently the rule of law will not prevail.
- 8) Judiciary is a public institution mandated to provide essential checks on other public institutions.
- 9) A fair and efficient judiciary is key to anti-corruption efforts.
- 10) Judicial corruption appears to be a global problem. It is not limited to a particular country or region.
- 11) Judiciary in India has always been commendable for its role in eradicating social evils and bringing justice to the people.
- 12) Separate Courts to try corruption. Example: (Cases against People's Representative)

43. தேசிய மற்றும் மாநில தகவல் ஆணையத்தின் கட்டமைப்பு மற்றும் பணிகளை விவரிக்க.

Describe the structure and functions of State and National information commission.

State Information Commission:

Appearance:

- 1) Creation under Right to Information Act - 2005
- 2) Formed in 2005 in Tamil Nadu

System:

- 1) Chief Information Commissioner – 1
- 2) Information Commissioners – not exceeding 10 (currently 6)
- 3) People with knowledge related to society, science, technology, law, management

Tenure (m) Appointment:

- 1) 5 years / 65 years
- 2) Appointment – Governor

Authority:

- 1) Jurisdiction vis-à-vis Civil Court
- 2) Any person may be summoned as a witness in writing during the trial.
- 3) Files can be obtained from any organization.

Central Information Commission:

Appearance:

- 1) Formed under Right to Information Act - 2005
- 2) Unconstitutional

System:

- 1) Chief Information Commissioner – 1
- 2) Information Commissioners – 10

3) Legal, scientific, social, management, technical experience and knowledge

Selection Committee:

- 1) Prime Minister
- 2) Leader of Opposition
- 3) Committee of Cabinet

Tenure (m) Appointment:

- 1) 5 years / 65 years
- 2) Appointment – President

Tasks:

- 1) 5 years / 65 years
- 2) Appointment – President

Complaints and investigations to:

- 1) A person who has been denied the requested information
- 2) The information is not made available within the prescribed period
- 3) One who considers the fee charged to be excessive

Arbitrary Authority:

In respect of any matter, an inquiry may be automatically ordered if there is sufficient cause.

Jurisdiction vis-à-vis the Corporation Law Court:

- 1) Calling the individual to trial
- 2) Receiving files from any court or office
- 3) Finding and examining documents

Commands to other systems:

- 1) Requirement to furnish information in specified form
- 2) Allocation of training to officers
- 3) Annual Report from Public Sector Officers

(15 MARKS)

1. இந்தியாவில் மாவட்ட ஆட்சியரின் மாறிவரும் பங்களிப்பு குறித்து விவரிக்கவும்.

Describe the changing role of District Collector in India.

- ✓ The District Collector's Office "admirably retained the historic character of the transition from foreign to national rule."
- ✓ The company is still a cherished one. After independence, its role has become increasingly multi-dimensional.
- ✓ Major factors influencing the emergent role of the Collector: Democratic system in the country, serious efforts at decentralization, increasing development responsibilities, rise of public consciousness and free expression of public opinion.
- ✓ Before enumerating the functions of the Collector, a brief summary is given regarding the official status of this post.
- ✓ The Collector belongs to the Indian Administrative Service and is appointed under the Land Revenue Code
- ✓ And has powers under various Central and State Acts by express provisions or delegation.
- ✓ According to the current scheme of IAS he is assigned to a state. He is also known as District Collector, District Officer, District Magistrate and in some states Deputy Commissioner.
- ✓ IAS consists of direct recruits and promotions from the State Civil Services.
- ✓ Hence, IAS direct recruits are posted as Collectors in their twenties, while IAS promotees from the

State Civil Services generally occupy this post in their fifties.

- ✓ While the British Collectors saw themselves as the uncrowned sovereigns of an empire and the people as subjects to be ruled, the new breed of IAS officers were full of enthusiasm and ideals for the betterment of the people.
- ✓ Social structure also changed. Earlier the collectors belonged to the upper echelon of the society, but now due to the spread of education and reservation an egalitarian system has emerged.
- ✓ Some of the collectors belong to the lower income group and therefore have a greater degree of sympathy and understanding for the lower class.
- ✓ This change in the IAS system has the greatest potential to affect the ultimate authority of the bureaucracy and its ability to be controlled by social forces.
- ✓ Although there was a change in the attitude of the bureaucracy towards the public, the promulgation of the new constitution weakened the position of the Collector. Several factors are responsible for this change.
- ✓ The Constitution dilutes the post of a District Magistrate. Article 50 of the Constitution separates the judiciary from the executive.
- ✓ The district now has separate judicial officers, therefore, the Collector no longer has the same judicial powers as the District Magistrate did earlier.
- ✓ The political party system that flourished after independence acted as another obstacle to the development of collector powers.
- ✓ Parties have become an important channel of communication between the people and the government.
- ✓ And sometimes the Collector sidelines himself when important important decisions are taken which affect the common man.
- ✓ Besides, many technical departments such as labour, agriculture, co-operatives etc. came into being and the executive officers managing these departments led to a reduction in the power of the Collector.
- ✓ While much has been said about the developmental role of the Collector, the sad fact is that democratic decentralization in the form of Panchayat Raj has drastically reduced his powers in some states.
- ✓ More work for the Collector, loss of contact with the people, frequent breakdown of law and order machinery,
- ✓ Many factors like large scale districts, problems in coordination of police, revenue administration and technical departments. Plays a role in determining the extent of the actual authority of the Collector.
- ✓ "The position of the Collector is an excellent example of unclassified, unconsolidated, diffused responsibility, which is one of the remarkable features of the Indian administrative system."
- ✓ His activities are "in relative importance and state to state.
- ✓ Even change from season to season in the same state or district".

2. மாநில தலைமை செயலகத்தின் பங்கு, கட்டமைப்பு மற்றும் செயல்பாடுகளை தெளிவுபடுத்துக.

Elucidate role, structure and functions of state secretariate.

Functions of State Secretariat:

- ✓ It is the center of political and administrative activities of the state.
- ✓ It helps the policy makers in all issues related to the state.
- ✓ It acts as an Advisory Expert Committee for the State.
- ✓ It facilitates coordination between various departments.
- ✓ It co-ordinates various policies and programs of the Govt.
- ✓ It advises the Minister in drafting Bills.

- ✓ It supports formulation of rules and regulations.
- ✓ It prepares the budget and controls public expenditure.

Role of Secretariat:

- ✓ Assisting Ministers in formulating policy, modifying policies from time to time and discharging their legislative responsibilities;
- ✓ Draft legislation and make rules and regulations;
- ✓ Coordinating policies and programmers, supervising and controlling their activity and reviewing the results;
- ✓ Budgeting and cost control.
- ✓ Maintaining liaison with Government of India and other State Governments; And
- ✓ Overseeing the smooth and efficient running of the administrative machinery and initiating measures to develop more personnel and organizational capabilities.

Organization of Secretariat:

Officers:

- ✓ Normally, the hierarchy of officers consisted of three levels. Under this, a general administrative department is headed by a secretary consisting of deputy secretaries and deputy/assistant secretaries.
- ✓ But with the development of the functions of various secretarial departments, the number of levels in the hierarchy of officers is increasing.
- ✓ As a result, the posts of Additional and/or Joint Secretaries have also been created in some states between the Secretary and Deputy Secretary.

Office:

- ✓ A distinctive feature of the Secretariat system in India is the distinction between its two component parts – “Intermediate Staff of Certain High Officers” and “Permanent Office”.
- ✓ Officers in each department come and go as they hold tenure. It is the office manned by the permanent staff that provides the element of continuity needed by the Secretariat.
- ✓ Unlike officers, office is a permanent element in the secretariat system. Office components consist of supervisors (or divisional officers), assistants, clerks, computer operators etc.
- ✓ The office does spadework based on which officers consider cases and take decisions. The office provides materials to officials, which form the basis for decision-making.

3. கிராமப்புற வளர்ச்சியில் டி.ஆர்.டி.ஏ-வின் பங்கை ஆய்வு செய்க.

Critically examine the role of DRDA in rural development.

- ✓ The District Rural Development Agency's Program Director will be the District Additional Commissioner or the Associate Director of the Rural Department.
- ✓ Assistant Directors of Rural Development Departments under the Program Director act as Assistant Program Officers. Since 1999, the Government of India bears 90% of the administrative expenses of the District Rural Development Agency and the State Government bears 10%.
- ✓ The Tamil Nadu Department of Rural Development and Panchayats supervises the activities of the District Rural Development Agency at the state level.
- ✓ Infrastructure of Village Panchayats with funds allocated by Government of India and Government of Tamil Nadu for Rural Development Programme.
- ✓ Rural employment, health, basic education, medical, social security, women development, handicraft development etc. Panchayat Unions undertake socio-economic development work through District Rural Development Agency.
- ✓ They should also ensure proper maintenance of accounts including funds allocated to banks or implementing agencies as per the guidelines of different schemes.

- ✓ The role of TRDA is based on planning; coordinating with other organizations such as government, non-government, technical and financial for successful project implementation.
- ✓ DRDA facilitates community and rural poor participation in the decision-making process, oversees the process to ensure adherence to guidelines, quality, equity and efficiency.
- ✓ Reporting to the prescribed authorities on DRDA implementation; Promote transparency in decision making and implementation.
- ✓ DRDAs will coordinate and supervise BPL census and other surveys as may be required from time to time.
- ✓ DRDAs will assist in carrying out/ conducting action research/ or evaluation studies initiated by Central/ State Governments.

4. மத்திய பணியாளர் தேர்வு ஆணையத்தின் கட்டமைப்பு பங்கு மற்றும் பணிகளை விவரிக்க.

Explain the structure, role and functions of Union Public Service Commission.

1. Union Government, Union Public Service Commission is a constitutional office.
2. Article 315 to 323 of the Constitution of India and Part 14 are mentioned in this regard.

Historical Background of Central Government Union Public Service Commission:

1. Civil Service Selection Boards were established for the first time during the British rule in India.
2. The Federal Staff Selection Commission was created in India in 1926 as per the report of the Lee Commission under the Government of India Act 1919.
3. As per the Government of India Act 1935 separate Staff Selection Boards were created for the provinces and Federal Staff Selection Board Provincial Staff Selection Board was formed.
4. Organization of the Union Government, Union Public Service Commission the President shall determine the positions of the Chairman and members of the Commission.
5. The Constitution of India generally prescribes certain qualifications.
6. Out of the total number of members who can be appointed to the Selection Board, a fraction of the members should have at least 10 years of service in the Central or any State Government.
7. Tenure for a maximum of six years or till the age of 65 years.
8. Removal The President is empowered to remove the Chairman and members of the Public Service Commission.
9. Cause is misconduct or incompetence.

Functions of Selection Board:

1. Public Service Commission selects eligible persons for all India posts, Central posts, Union Territories which may be administered by the Central Government.
2. Advises the States and Union Territories generally regarding the Public Service Commission with the approval of the President.
3. Advises the Government regarding recruitment of personnel.
4. Advises the Government for disciplinary action to be taken against the employee.
5. The Public Service Commission submits an annual report to the President.
6. Certain restrictions have been imposed by the Constitution while carrying out such work.
7. No advice can be given to the Government regarding reservation.
8. Consultations regarding appointment in respect of Scheduled Castes and Tribals.
9. Advises regarding training wages to the employee.
10. The President may make any amendment relating to personnel and such amendment shall be tabled in Parliament within 14 days.
11. Public Service Commission is an important body for selection of qualified persons.
12. All advice given by them is not binding on the Government in any way.

13. The Government seeks the advice of the two bodies regarding disciplinary action against Government servants after the formation of the Central Anti-Corruption Agency.(Vigilance Commission)
14. The Union Government Staff Selection Commission's advice is sometimes not followed when different advice is given.
15. The Public Service Commission ensures fairness and transparency in the administration of the Government by selecting qualified persons.

5. தமிழகத்தின் பல்வேறு பணியாளர் ஆட்சேர்ப்பு முகமை பற்றி விரிவாக விவரிக்க.

Explain in detail the various recruitment agencies of Tamil Nadu.

In case of Tamil Nadu various staff selection agencies are working to improve the management to select the employee for the government administration.

Tamil Nadu Public Service Commission (TNPSC):

1. A main body for selection of civil servants.
2. First Staff Selection Commission was established in 1924 in India.
3. In 1929 its name was changed to Madras Staff Selection Commission.
4. According to the Government of India Act 1935 separate Civil Service Commissions were created for the State and Federal Government of India.

System:

1. It was created as a constitutional body after the constitution of India
2. Article 315 to 323 of the Constitution of India Article 16 of the Constitution deals with Staff Selection Commission
3. The Chairman and the number of members shall be decided by the Governor of the State

Tenure:

Six years or till completion of 62 years.

Termination of employment:

The President will dismiss after consulting the Supreme Court.

Reason for deletion:

Misbehavior or unfitness.

Important Tasks:

1. Conduct of examination for selection of employees required by the State Govt.
2. Advising the Government regarding promotion.
3. Advising on disciplinary action against Government servants.
4. To advise the Government for making rules relating to recruitment of employees.
5. Providing advice to the Government regarding recruitment of temporary staff.
6. Its annual report shall be submitted to the Governor.

Tamil Nadu Uniformed Service Recruitment Board (TNUSRB):

1. It was started in 1991.
2. It shall have a chairman and members.
3. A police officer of the rank of DGP will act as its Chairman.

Its important functions are:

1. Police Jail Department and Fire Department.
2. Is it an organization to select people for posts like Deputy Police Inspector, Block Two Constable, Jail Durai Constable etc.
3. Also sub-inspectors will be selected for specialized tasks like technology, fingerprinting etc.

Teachers Examination Board – 1987(TRB):

System Mode:

1. It shall consist of Chairman and Members.
2. An IAS officer will act as the head of these important functions.
3. Selection of teachers for government schools and colleges etc.
4. Selection of Professors for Government Technical Colleges and Engineering Colleges.
5. Selection of Professors for Arts and Science Colleges.
6. To advise the Government regarding the selection of teachers.

Medical Recruitment Board (MRB):

1. The startup was launched in 2012.
2. System of Organization It consists of Chairman and Members.

Important Tasks:

1. Recruiting agency for Hospitals like Doctor Nurse Pharmacist.
2. An agency that selects people for the posts related to Food Safety Officer.

Tamil Nadu Forest Uniform Service Recruitment Board (TNFUSRB):

1. Started in 2012.
2. An organization to select people for posts of Deputy Conservator, Junior Conservator and other officer related posts in Forest Department.
3. Providing advice to the Government regarding recruitment.

District Employment Office:

1. This is an important office that functioned before the above offices
2. It is an important system of providing employment on the basis of seniority for government jobs
3. Its authority was limited after direct recruitment of employees started
4. All the above mentioned offices are important bodies in the selection and provision of staff for the full functioning of the government administration.

6. தமிழ்நாடு பணியாளர் தேர்வு ஆணையத்தின் கட்டமைப்பு பங்கு மற்றும் பணிகளை விளக்குக.

Elucidate the structure, role and functions of Tamil Nadu Public Service Commission.

1. **Historical Background:** According to the Government of India Act 1935 separate Staff Selection Commission was created for the provinces in India.
2. Before that Madras Province Staff Selection Board was formed in 1924 and in 1929 it was renamed as Madras Staff Selection Board.
3. It is noteworthy that the first Staff Selection Commission to be formed in a province in India.
4. Article 315 to 323 Part 14 of the Constitution of India deals with State Government Service Commission.
5. The Governor of the State may determine the total number of members of the State Government Staff Selection Board consisting of Chairman and Members.
6. Article 315 to 323 Part 14 of the Constitution of India deals with State Government Service Commission.
7. The Governor of the State may determine the total number of members of the State Government Staff Selection Board consisting of Chairman and Members.
8. At least half of the total number of members of the Staff Selection Commission should have at least 10 years of service in the Central Government or any State or Union Territories.
9. The Constitution does not prescribe any special qualification for this.

Duration:

Six years from the date of appointment or upto 62 years of age

Dismissal:

President can dismiss

Reason:

Misbehavior and Incapacity

Tasks:

1. Selection of staff required by the State Govt.
 2. Conduct of Examinations for State Govt Posts.
 3. Providing advice to the Government regarding personnel.
 4. To advise the Government on disciplinary action to be taken against the employee.
 5. To advise on the appointment of temporary staff.
 6. Advising on action related to dismissal.
 7. To provide other advice to the Government regarding personnel management.
 8. The Civil Service Commission shall submit its annual report to the Governor of the State.
 9. Conduct of examination in connection with the selection of employees of Public Sector Undertakings under the State Government.
 10. The Indian political system has imposed certain restrictions on the Public Service Commission.
 11. No advice can be given regarding reservation.
 12. The Governor of the State may make any amendment in relation to the Public Service Commission.
 13. Amendments so made shall be laid before the State Legislature within 14 days.
 14. The Public Service Commission plays an important role in the personnel management of the State Government by selecting the required personnel for the State Government.
 15. Performs proper management by providing thorough advice regarding personnel selection.
 16. After setting up the Anti-Corruption Department in the State Government, the Government shall seek the advice of both these bodies.
 17. There is a possibility of conflict between these two bodies in case of such advice on disciplinary action.
7. பெண்களுக்கான பாதுகாப்பு மற்றும் அதிகாரம் அளிப்பதற்கான பல்வேறு அரசியலமைப்பு மற்றும் சட்ட அம்சங்களை விவரிக்க.

Explain in detail the various Constitutional and legal provisions to protect and empower women.

Constitutional Protection various sections of the Constitution directly and indirectly mention the protection and empowerment of women.

Fundamental Rights:

1. All are equal before the law as per Article 14.
2. According to Article 15 the Government shall not discriminate against any person on the basis of religion, race, caste, sex and Place of birth and the Government may take any special measures for the development of women and children.
3. Article 16 provides for equal opportunity in government jobs and public appointments.

Among the Directive principles of State Policy:

1. To ensure equal livelihood for men and women as per Article 39
2. To ensure equal work and pay for men and women.
3. 39 (A) Govt to take action to provide free legal aid.
4. According to Article 42 conditions should be created for women to work during maternity period.
5. Protection of educational and economic interests as per Article 46 from social injustice and exploitation.
6. Section 47 should raise nutrition and improve quality of life.

Basic Duties:

51 Any act that degrades the dignity of women should be avoided.

Constitutional Articles related to Empowerment of Women

1. About 33 percent of the posts of members and chairpersons of 243 D rural local bodies should be given to women.

2. The 73rd and 74th Amendments to the Constitution of India in 1992 mandated that 33 percent of the posts of members and chairpersons of 243 T urban local bodies should be reserved for women.
3. Legal measures have been taken for proper implementation of the articles enunciated in the Constitution.

Laws to protect women in India:

1. Dowry Prevention Act 1961.
2. Domestic Violence Protection Act 2005.
3. Indecent Representation of women (Prohibition) Act, 1986.
4. Maternity Benefit Act 1961.
5. Equal Pay Equal work Act 1976.
6. Prevention of Prostitution Act 1956.
7. Prevention of Degradation of Women Act 1986.
8. Prevention of Sexual Harassment of Women in the Workplace and Redressal of Grievances Act 2013.
9. National Commission for Women Act 1990.
10. Tamil Nadu State Commission for Women Act 1993.

8. தமிழக அரசின் பல்வேறு வருவாய் ஆதாரங்கள் பற்றி விளக்குக.

Elucidate the various revenue sources of the Government of Tamil Nadu.

State Tax Revenue:

1. Source address
2. Tax on agricultural lands
3. Excise duty on alcohol and drugs
4. Farm Tax (Agricultural Lands)
5. Other fees in the State List for Courts Ordinance
6. Land Revenue
7. Fee for documents not in Central List.
8. Agricultural Income Tax
9. Tax on land and buildings
10. License tax for extraction of mineral resources.
11. Tax on consumption and sale of electricity
12. Entry tax on goods for consumption and sale in the local area.
13. Sales tax on goods other than newspapers
14. Tax on advertisements other than newspapers.
15. Tax on goods and passengers carried by road and water
16. Vehicle Tax.
17. Tax on animals and boats.
18. Business tax on business and workers.
19. Tax on amusements and gambling.
20. Road toll.

Goods and Services Tax (GST)

Goods and Services Tax is levied as an indirect tax on goods and services across the country. It is a comprehensive, multi-stage destination based value proposition.

1. **CGST - Central Goods and Services Tax (CGST):** A tax levied by the Central Government on domestic sales ((eg) transaction in Tamil Nadu)
2. **SGST - State Goods and Services Tax (SGST):** A tax levied by the State Government on domestic sales (eg transactions within Tamil Nadu).

3. **IGST – Integrated Goods and Services Tax (IGST):** A tax levied by the central government on state government sales (eg from Punjab to Tamil Nadu).

State Non – Tax Revenue:

1. Interest on loan
2. Dividends
3. Royalty paid to minerals
4. Revenue from Public Sector Undertakings
5. Customs Fees
6. Entry Fee
7. Income from different types of services

9. பட்ஜெட்டின் பல்வேறு நிலைகள் பற்றி எழுதுக.

Write about different stages of Budget.

1. The word Budget does not appear anywhere in the Constitution of India and it is mentioned as the Statement of Budget.
2. The financial year of the Government is from 1st April to 31st March.
3. Budget statement of the Central Government is stated in Article 112 of the Constitution of India.
4. Statement of Budget of the State Government as stated in Section 202.
5. Budget will be introduced under Parliament and State Legislature.
6. Preparation of the Union Budget by the Department of Economic Affairs functioning under the Union Ministry of Finance.
7. Budget statement has been prepared since British period.
8. First prepared 1869.
9. This budget was divided into two parts in 1924 one is General Budget and second is Railway Budget.
10. The Budget was bifurcated based on the recommendation of the Constituent Committee to submit a separate budget statement for the Railway Department.
11. In 1947, Shanmugam, the first finance minister of independent India, presented the budget statement for the first time after India's independence.
12. This report should be filed every financial year specifying the revenue and expenditure of the Government.
13. This report is a procedure for approval by the legislature of the tax and non-tax revenue and expenditure accruing to the administration of the government.
14. The government decided to file the central government budget statement as a single statement from 2017 onwards.
15. That is, as per the report of the Bibek Debroy Committee, the separate budget statement for the Railway Department was consolidated and filed as a general budget statement.
16. Since that day the practice has been followed that the Union and State Finance Ministers present this budget statement on behalf of the President and the State Governor.
17. Different levels of budget statement.

Introduction of Budget Statement:

The Budget Statement is brought only in the Lok Sabha of the Parliament and in the Legislative Assembly of the State Legislature.

General Discussion:

1. The Finance Minister shall subject the policies and schemes of the Government to public debate and various sections shall put their views in this public debate.
2. After the completion of the public debate, the budget report will be sent to the Rajya Sabha.
3. Rajya Sabha cannot make any amendment to the budget statement as substantive.

4. The Rajya Sabha cannot hold a referendum.
5. Rajya Sabha cannot reject.
6. Rajya Sabha can only debate.

Subject to scrutiny by Standing Committee of Parliament:

There are 31 departmental level committees in the Parliament and those level committees systematically analyzed the budget report and submitted a report to the Parliament regarding how much funds should be allocated to the respective departments.

Voting on grant:

1. How much subsidy should be allocated to various sectors will be taken up sector wise for this discussion and will be done through voting.
2. This power does not apply to the Rajya Sabha where the debate on the demand for grant is held only in the Lok Sabha.
3. During this time various cut-off resolutions will be brought to reduce or completely cancel the specified amount. They are Policy cut motion, Economic cut motion, and Token cut motion.

Passing of Appropriation Bill:

1. If expenditure is to be incurred from the consolidated fund as per the rules of the political system, such expenditure can only be incurred by passing an appropriation resolution.
2. Apart from that, the amount of grant allocated to each department and the amount received from this fund will be taken into consideration in the appropriation bill and it will be brought into law.
3. Expenditure of funds shall be recognized as legal only if so enacted.

Passing of Finance Bill:

1. Its main object is that this Finance Bill is passed to authorize the revenue and expenditure due to the Government as fully legal.
2. And the Finance Bill will recognize as legal any changes in taxes which are important for financial matters.
3. Provisional collection of Taxes Act, 1931.
4. The President should give his assent to the Finance Bill at least 75 days after it is passed
5. A budget statement is complete after passing through these six steps.

10. நிதி நிர்வாகத்தில் சட்டமன்றத்தின் கட்டுப்பாடுகள் பற்றி சுவர்ந்து ஆராய்க.

Critically examine the legislative control over Financial Administration.

1. Legislature has various controls over financial management.
2. First is the constitutional provisions.
3. Section 112 Statement of Budget of the Central Government.
4. It shall be presented every year before the Parliament on behalf of the President.
5. This account will be prepared on the basis of income and expenditure.
6. Section 113 requires all expenditure to be allowed after a vote in Parliament.
7. These are also called polls on grant requests.
8. Prior approval of the President is required for making such grant request.
9. Section 114 Passing of Appropriation Bill for drawing money from Consolidated Fund of Government.
10. Section 115 deals with allocation of additional funds.
11. Article 116 deals with introduction of Finance Bill in Parliament with prior assent of the President.
12. Important Committees in the Legislature dealing with finance.

Public Accounts Committee:

1. Total membership is 22, 15 – Loksabha, 7 – Rajya Sabha.
2. To scrutinize the accounts of the execution of these functions assigned to the Parliament.

3. Scrutiny of the accounts of the Central Auditing Officer.
4. Examining various statements related to tax.
5. Scrutiny of expenditure incurred by various Ministries and Departments.

Important limitations:

1. Certain accounts cannot be audited.
2. No voluntary account will be taken up for scrutiny.
3. Ministers are not responsible for this committee.

Committee on Public Enterprises:

1. Total membership is 22
2. Tenure is one year
3. 15 Members in Lok Sabha
4. 7 Members in Rajya Sabha

Important Tasks:

1. Scrutiny of the report of the Comptroller and Auditor General (CAG) in relation to the public enterprises of the Government.
2. Examining accounts relating to production, balance, revenue, debt of public institutions.
3. No change can be brought about in the policies of public institutions.
4. Ministers will not be controlled by this committee in any way.

Estimate Committee:

1. Total Membership is 30 persons.
2. As far as this committee is concerned, all are members of the Lok Sabha.
3. Rajya Sabha has no representation in this Committee.

Important Tasks:

1. Submission of economic analysis reports on government administration.
2. Examination of whether appropriations passed with the approval of Parliament have been properly made.

11. மின் ஆளுகை என்றால் என்ன? அதனுடன் தொடர்புடைய பல்வேறு மாதிரிகள் மற்றும் சவால்களைப் பற்றி விவாதிக்க.

What is e – Governance? Discuss its various models and challenges associated with it.

1. The "e" in e-personality stands for 'electronic'.
2. Models of e-governance.
3. Broadcast model for disseminating useful administrative information to inform citizens;
4. Critical flow model to direct information of critical value to the target audience;

5. Model of Comparative Analysis:

1. National Satellite Based Computer Network (NICENET) was launched in 1987 and District Information Network was launched by National Informatics Center (NISNIC).
2. In 2006, the National E-Governance Plan (NeGP) was formulated by the Department of Electronics and Information Technology and the Department of Administrative Reforms and Public Grievances.
3. E-Governance: Objectives
 1. To simplify governance for government, citizens and businesses.
 2. To make government administration more transparent and accountable.
 3. To ensure that administration of services and information is prompt and efficient

6. Communications in e-Governance:

There are four main types of communication in e-governance.

7. Government to Government (G2G):

Information is exchanged within governments, i.e. from the central government to state governments or local bodies or to different branches within the same government.

8. Government to Citizen (G2C):

Citizens are provided with a platform to interact with the government and access various services provided by the government.

9. Government to Business (G2B):

Businesses interact freely with government by respecting the services that government provides to businesses.

10. For Government Employees (G2E):

The communication between the government and its employees is very fast and efficient.

Challenges for e-Governance:

Technical fault:

1. **Security:** Internet transactions are a major concern due to lack of security. Insurance, banking and utility bill payments are all handled by e-government platforms. Loopholes in the system give the individual a bad experience.
2. **Privacy:** Misuse of personal data is another aspect that has proven challenging.

Economic Issues:

1. **Cost:** Implementing e-governance functions and maintaining services is very expensive.
2. **Reusability:** Any model developed by the government should be reusable. E-Governance is a nationwide program that includes software or programs that can be used by government agencies
3. **Maintenance:** Government should continuously maintain such platforms and introduce new software to meet the current demands of citizens.

Social Issues:

1. **Accessibility:** Many people in rural areas cannot access such a portal due to language barriers, inadequate infrastructure etc.
2. **Illiteracy:** Illiteracy is a major factor that makes such sites ineffective.
3. **Language:** A large section of the population does not understand English. Government should bridge the gap and include various languages on their websites.
4. **Awareness:** Informed citizens, concerned organizations and government departments should take responsibility for disseminating information and improving e-services.
5. **Trust:** Rising cybercrimes like spoofing, data tampering, data leakage, transaction frauds pose problems for e-governance.
6. **Inequality:** Unequal distribution of technology restricts users and prevents them from availing benefits offered under e-governance schemes.
7. **Security:** Government should have a high level of security to protect citizens' information.

12. 'ஒரு நாடு, ஒரு தேர்தல்' என்பதை விமர்சன ரீதியாக ஆராய்க.

Critically Examine 'One Nation, One Election'.

1. Setting up the Indian electoral cycle so that elections to the Lok Sabha and State Assemblies are coordinated as 'Simultaneous Elections.
2. Defined as (One nation one election).
3. The first general elections to the House of People (Lok Sabha) and all state legislatures were held simultaneously in 1951-52.
4. That practice in the years 1957, 1962 and 1967. However, the cycle was disrupted in 1968 and 1969 when some legislatures were dissolved early.

5. In 1970, the Lok Sabha was prematurely dissolved and fresh elections were held in 1971. Elections to the Lok Sabha and State Legislatures are held separately, disrupting the simultaneous election cycle.
6. Qualifications of simultaneous elections:
 1. Governance
 2. Legislative power
 3. Economy
7. Frequent elections cause huge economic burden.
8. Elections often involve huge expenditures by various stakeholders such as political parties and individual candidates.
9. Frequent elections require huge administrative or administrative expenditure on the part of the government.
10. Education – SE has the maximum impact on the education sector as a large number of teachers are involved in the election process.
11. International Practice – The British Parliament, considered the 'Mother of Parliaments', enacted the 'Fixed Term Parliaments Act 2011',
12. By this, elections will be held once in 5 years.
13. Simultaneous elections are also successfully held in South Africa and Sweden.

Disadvantages of simultaneous elections:

1. Simultaneous elections are not mandated by the Constitution
2. Current election expenditure in India is only 0.05% of total annual expenditure,
3. And this is not a high price to pay for the world's largest and most vibrant electoral democracy.
4. Model Code of Conduct (MCC) If the Model Code of Conduct prevents the government from taking welfare measures or starting infrastructure projects. The solution is to reform the code rather than the electoral cycle.
5. Absence of elections in the intervening period on the issue of governance, some elected representatives may not be very interested in delivering governance.
6. Hence frequent elections check and balance the performance of elected representatives.
7. Constitutional Challenges The Prime Minister or Chief Minister may advise the President or the Governor for early dissolution of the Lok Sabha or Rajya Sabha.
8. But as per Articles 85 and 174 of the Constitution, the election must be held within 6 months of the dissolution of either of the Lok Sabha and Legislative Assemblies.
9. If the government loses its majority through no-confidence, elections become inevitable.
10. Federalism – Anti-federal principles where each state has its own form of political competition.
11. Concurrent Elections. Diversity – SE will move local issues or issues of state importance to the background.
12. It completely ignores the diversity of the country.
13. Resource Intensity – The Chief Election Commissioner (CEC) recently rejected the possibility of holding simultaneous elections due to resource constraints.
14. SE will require a large number of Electronic Voting Machines (EVMs) and Voter-Verifiable Paper Audit (VVPAT) units.
15. Availability of VVPATs in every state is also a logistical challenge.

16. Constitutional Amendments:

1. Article 83: Defines the maximum term of the Lower House of Parliament.
2. Article 172: Defines the maximum term of the State Legislature.
3. Article 85(1): Defines sessions, adjournment and dissolution of Parliament.
4. Article 174(1): Defines sessions, adjournment and dissolution of State Assemblies.

5. Article 75(3): Committee of Ministers in Lok Sabha.
 6. Section 164(2): Committee of Ministers in the State Assembly.
 17. Amendments to 10th Schedule as to disqualification of members.
 18. Other Amendments Sections 14 and 15 of the Representation of the People Act, 1951.
 19. Rules of Procedure of the Lok Sabha.
 20. Rules of Procedure of State Assemblies.
13. வகுப்பு வாதத்தைக் கட்டுப்படுத்துவதில் தேசிய ஒருமைப்பாட்டு குழுவின் பங்கைப் பற்றி விவாதிக்க.

Discuss the role of National Integration Council in containing communalism.

1. Beginning 1961.
2. Initiated by Indian Prime Minister Jawaharlal Nehru.
3. It is a non-political organization.
4. It is headed by the Prime Minister.
5. Members are Union Cabinet Ministers, Chief Ministers of all States, Leaders of major political parties, Chairman of University Grants Commission, Chairman of National Commission for Scheduled Castes, Chairman of National Commission for Scheduled Tribes.
6. Prominent persons from non-governmental organizations, entrepreneurs and industrialists, representatives of labor organization.

Background:

1. National Integration Committee is an organization established to prevent religiousism, casteism, regionalism, linguisticism and ethnicity which are against the development of the country.
2. Their first meeting was held in 1962 and so far about 19 meetings have been held.

Its main functions are:

1. To provide all kinds of advice to the Government regarding national integration and national unity.
2. Prevention of communal riots.
3. Advise to prevent violence caused by casteism, linguisticism, and regionalism.
4. Necessary action to maintain peace.
5. To give important advice to bring peace and harmony in society.
6. To provide suggestions to the Government to mitigate communalism if it occurs.
7. To establish a unity among all religions.
8. To create a unity among all the sects.
9. Ensuring safety of women.
10. Ensuring the protection of ethnic minorities.
11. Ensuring protection of Scheduled Castes and Tribals.
12. Monitoring Social Networks.
13. Advising on suppression of groups working against national unity.
14. Coordination with all community and religious leaders.
15. Ensuring the unity of the country.
16. To protect the unity of all citizens, social, economic justice, political justice etc.
17. Ensuring the secular nature of the country.
18. To provide advice for suppression of social injustices perpetrated against them.

14. குடியரிமை திருத்தச் சட்டம், 2019 - ன் முக்கிய விதிகளைப் பற்றி விவாதிக்க.

Discuss the major provisions of Citizenship Amendment Act, 2019.

1. The Act seeks to amend the Citizenship Act, 1955 to make illegal immigrants from Afghanistan, Bangladesh and Pakistan, Hindus, Sikhs, Buddhists, Jains, Parsis and Christians eligible for Indian citizenship.

2. The Act aims to facilitate the conversion of persecuted people from India's neighboring countries into citizens of India.
3. The Act applies to those who are "forced or compelled" to seek refuge in India on grounds of persecution on grounds of religion. Its objective is to protect such people from illegal migration activities.
4. The amendment relaxes the naturalization requirement from 11 years to 5 years as a specific condition for applicants belonging to these six religions.
5. The cut-off date for citizenship is December 31, 2014, which means the applicant must have entered India on or before that date.

The law says about acquiring citizenship:

1. Such persons shall be deemed to be citizens of India from the date of their entry into India, and
2. All legal proceedings against them in connection with their illegal migration or citizenship shall be closed.
3. Immigrant status that allows a foreign citizen of Indian origin to live and work in India indefinitely - It also states that holders of Overseas Indian Citizens (OCI) cards can lose their status if they violate local laws for major and minor crimes and violations.

Conclusion:

1. Parliament has unbroken powers to make laws for the country when it comes to citizenship.
2. But the opposition and other political parties have alleged that this law of the government violates some fundamental aspects of the constitution like secularism and equality.
3. It may reach the doors of the Supreme Court, where the Supreme Court will be the final interpreter.
4. If it violates constitutional aspects and goes to extreme bars it will be struck down, otherwise we will continue to keep the law.

15. பேரிடர் மேலாண்மைக்காக இந்தியாவில் உள்ள பல்வேறு நிறுவன கட்டமைப்புகளை விவரிக்க.

Describe the various institutional mechanism present in India for disaster management.

1. The Disaster Management Act, 2005 deals with the management of disasters.
2. Structure in India at National, States and District levels.

National Disaster Management Authority (NDMA):

1. It is a National Authority responsible for laying down the policies, plans and guidelines for disaster management
2. Chairperson-Prime minister
3. Total – 9 members

National Executive Committee (NEC):

1. Implementing the plans and policies of NDMA;
2. Coordinating and monitoring body for disaster management;
3. Prepare the National Plan to be approved by the NDMA;
4. Prepare guidelines for different ministries with respect to disaster management.

State Disaster Management Authority (SDMA):

1. Established by every state government.
2. Chairperson- Chief Minister
3. Members-nine

State Executive Committee (SEC)

State Authority and ensure the compliance of directions issued by the State Authority.

District Disaster Management Authority:

1. The DDMA are set up by state government

2. It consists of Chairperson and seven members.
3. The collector or District Magistrate or Deputy Commissioner would be the chairman.
4. District planning, coordinating and implementing body for disaster management.
5. It will coordinate with the upper two tiers of the structure and will plan the implementation of the prevention, mitigation and preparedness at local level.

National Disaster Response Force:

1. Specialist response to a threatening disaster situation or disaster.
2. NDRF was established in 2006 under The Disaster Management Act, 2005
3. It comes under Ministry of Home Affairs
4. It is the only dedicated disaster response force in the world
5. 12 battalions in NDRF

National Disaster Response Fund:

1. The central government will be able to use the money from this fund to meet expenses for emergency response, relief and rehabilitation.
2. National Institute of Disaster Management
3. Planning and promoting training and research in the area of disaster management.
4. National organization working for human resource development at national level in the area of disaster management.

16. இந்தியாவில் மனித உரிமைகளைப் பாதுகாப்பதில் தேசிய மனித உரிமை ஆணையத்தின் பங்கினை விளக்குக.

Elucidate the role of National human rights commission to protect the human rights in India.

1. Established – 12th October, 1993
2. Under the Protection of Human Rights Act, 1993
3. It is established in accordance with the Paris Principles.

Members:

1. Multi-member system
2. Chairman,
3. Five full-time members and
4. Seven members.
5. The Chief Justice of India or a Judge of the Supreme Court may preside.

Appointment: President

Tenure: 3 years (or) 70 years,

Removal: President, Proved misconduct or incapacity.

Role of Commission:

1. Powers of Civil Court.
2. Proceedings are judicial in nature.

NHRC inquires:

1. Either voluntarily or after receiving a petition.
2. Power to intervene in any judicial proceedings involving allegations of human rights violations.
3. It can see a thing within a year of its occurrence,
4. The Commission shall have no power to inquire into any matter after the expiry of one year
5. The functions of the Commission are mainly of a recommendatory nature.
6. It has no power to punish violators of human rights. No relief including monetary relief can be given to the victim.
7. It has a limited role, powers and jurisdiction in relation to violations of human rights by members of the armed forces.

8. No power to act when human rights violations are committed by private parties.
9. It may go to any jail or any other institution under the control of the State Government.
10. NHRC conducts and promotes research in the field of human rights.
11. NHRC works to spread human rights literacy among various sections of the society.
12. Promotes awareness of safeguards to protect these rights through publications, media, seminars and other means.

Annual Report: Central Government and State Govt.

1. The annual reports of the Commission shall be laid before each Parliament or State Legislature respectively.
2. Memorandum of action taken or proposed to be taken on the recommendations of the Commission and reasons for disapproval of the recommendations,
3. NHRC has no mechanism of inquiry.
4. Urges Central and State Governments to investigate cases of human rights violations.
5. The NHRC can only make recommendations without the power to implement decisions.
6. NHRC cannot inquire into a complaint filed after one year of the incident.

NHRC failure:

1. Branded as a toothless tiger.
 2. Custodial torture still exists and NHRC has failed to raise its voice against such crime.
 3. Right to work and labor rights
 4. Unlawful killings
 5. Fake meetings,
 6. Mobs etc.
 7. Arbitrary arrest and detention
 8. Both NHRC and SHRC have failed due to lack of powers.
 9. Menace of manual scavenging still exists.
 10. The NHRC has not raised much voice against such violation of rights
 11. Violence and discrimination against women,
 12. Rape, murder etc. of children
 13. Sexual abuse is rampant and the NHRC has not pressed the judiciary and the government to take action.
17. இந்தியாவில் நீதித்துறை நியமனங்களில் கொலீஜியம் அமைப்பின் பங்கினை விமர்சன ரீதியாக பகுப்பாய்வு செய்க.

Critically analyse the role of collegium system in judicial appointments in India.

1. Appointment and transfer of judges of the Supreme Court and High courts in India.
2. It is neither a statutory nor a constitutional body
3. The SC collegium is headed by Chief Justice of India (CJI)
4. Four other senior most judges of the court.
5. HC collegium is led by its Chief Justice and four other senior most judges of that court.
6. Judges of the higher judiciary are appointed only through the collegium system

Evolution of Collegium system in India:

1. First Judges Case (1981)
2. It declared that the “primacy” of the Chief Justice of India (CJI’s) recommendation on judicial appointments and transfers can be refused for “cogent reasons.”
3. Second Judges Case (1993)
4. The Supreme Court introduced the Collegium system, holding that “consultation” really meant “concurrence”.
5. Third Judges Case (1998)
6. SC on the President’s reference (Article 143) expanded the Collegium to a five-member body, comprising the CJI and four of his senior-most colleagues.

Issues with judicial appointments:

1. Over the years successive collegiums not putting forth names disliked by the Government makes it a biased system.
2. Appointments to the top court seem to be the preserve of judges from the High Courts with a handful of appointments from the Bar
3. no appointments from the category of distinguished jurists (under Article 124)
4. National judicial appointments commission(NJAC)by 99 th constitutional amendment
5. NJAC was established to achieve greater transparency and accountability for the appointment of judges.
6. But it was struck down by the Supreme Court on the grounds that it was against the “Independence of Judiciary” i.e Principles of Basic Structure since it involved the Political Executive in the appointment of Judges.

Problems with the Collegium system:

1. Extra-constitutional or non-constitutional body ultimate power of appointing judges.
 2. It gives discretion to the judges who are part of collegium.
 3. Lack of transparency as meetings are held with a closed door.
 4. No prescribed norms regarding eligibility criteria, or even the selection procedure.
 5. There is no public knowledge of how and when a collegium meets,
 6. Nepotism and favouritism
 7. Lack of diversity
 8. SCs, STs, OBCs and minorities are grossly underrepresented in the collegium picks.
 9. Non-filling of vacancies.
 10. Difference of opinion.
18. தகவல் அறியும் உரிமைச் சட்டம் இந்தியாவில் நன்னடையைக் கொண்டுவருகிறது- கருத்துரைக்க.
‘Right to information act brings good governance’ – Comment
1. Right to Information (RTI) Act, 2005
 2. Citizens can obtain information from state or central government departments and offices as a legal right
 3. RTI Act has strengthened pillars of good governance like
 1. Participation,
 2. Transparency
 3. Legitimacy,
 4. Responsiveness.
 4. It is a tool of participatory democracy which augments good governance and socio-economic service delivery.
 5. **Checking corruption:** The Right to Information Act has become the most effective instrument to check corruption.
 6. **Brings transparency:**
 1. Under RTI Act, citizens seek information as a right from the state and it thereby promotes openness, transparency in administration by making the government more open to public scrutiny.
 2. It has empowered the people to question, audit, review, examine, and assess government acts.
 7. **Increases Accountability:** The RTI Act has empowered the people to hold public authorities accountable for the principles of public interests, good governance and justice
 8. **Decentralisation of Power:** RTI Act democratized the information and decentralized the power.
 9. **Promoting Participatory Democracy:**
 1. It enables maximum participation of people in functions of a democratic country including governance.
 2. People have shown increased interest in the affairs of government and sought information regarding various issues affecting their lives and well-being.

19. 'மத்திய தகவல் ஆணையம் (CIC) தகவல் அறியும் உரிமைச் சட்டத்தின் கீழ் மிக உயர்ந்த மேல்முறையீட்டு அமைப்பாகும், இருப்பினும் அதற்கு அதன் சொந்த வரம்புகள் உள்ளன' - மத்திய தகவல் ஆணையத்தின் அதிகாரங்கள் மற்றும் செயல்பாடுகளைப் பற்றி விவாதிக்க. 'The Central Information Commission(CIC) is the highest Appellate body under the Right to Information Act however it has its own limitations' - Discuss the powers and functions of central information commission.

1. Established by the Central Government -2005
2. Under the Right to Information Act (2005).
3. The Commission
4. Chief Information Commissioner
5. Ten Information Commissioners.
6. Appointment: President
7. Recommendation by a committee
8. Prime Minister as Chairperson,
9. Lok Sabha- opposition leader
10. Union Cabinet Minister nominated by the Prime Minister.
11. Tenure: The Chief Information Commissioner and an Information Commissioner shall hold office for such term as prescribed by the Central Government.
12. Reappointment- not eligible

Functions and Powers:

1. The commission can order inquiry into any matter if there are reasonable grounds.
2. The commission has the power to secure compliance of its decisions from the public authority.
3. The commission may recommend steps which ought to be taken for promoting such conformity, if public authority does not conform to the provisions of this act.
4. Duty of the commission to receive and inquire into a complaint from any person
5. Not received response to his information request within the specified time limits;
6. Information given is incomplete, misleading or false
7. Not been able to submit an information request because of non-appointment of a Public Information Officer
8. The fees charged are unreasonable
9. Refused information that was requested.
10. During the inquiry of a complaint, the commission may examine any record which is under the control of the public authority
11. All public records must be given to the commission during inquiry for examination.
12. The commission has the powers of a civil court
13. Summon and enforce the attendance of persons, and compel them to give oral or written evidence on oath and produce documents or things
14. Require the discovery and inspection of documents
15. Receive evidence on affidavit
16. Requisition public records or copies from any office or court
17. Issue summons for the examination of documents or witnesses
18. Any other matter that may be prescribed
19. Annual report - central government
20. The central government places this report before each house of Parliament.

Limitations:

1. Central Government controlling its terms of office,
2. Salaries and allowances
3. Conditions of service

4. Non-compliance of CIC orders;
5. No centralized database of RTI applicants at the Centre/State level
6. Personnel and infrastructural constraints;
7. High pendency of cases etc.

20. சமூக வளர்ச்சியில் தமிழகத்தை முன்னோடி மாநிலமாக மாற்றிய காரணிகளை பட்டியலிடுக.

List out the factors that made Tamil Nadu a pioneer state in social development.

1. An inclusive vision traced out by widely popular Tamil cultural figures turned political leaders, such as former chief ministers (the top executive post at the state level) for whom social justice and uplifting disadvantaged groups were central concerns.
2. Policy consistency and commitment of the state's political leadership to industrial development, which cut across the administration.
3. As well as the predictability that this created over time for investors—despite power alternating between the state's two primary parties on a regular basis.
4. The effectiveness of the bureaucracy in policy implementation, due to the recruitment of socioeconomically diverse cadres who were attuned to local challenges.
5. The ideological ties between bureaucrats and the regional political parties (and the competitive pressures to deliver that this created); and the establishment of specialised agencies.
6. Tamil Nadu Industrial Development Corporation (TIDCO) and the State Industries Promotion Corporation of Tamil Nadu (SIPCOT), to drive delivery of the state's economic vision.
7. The state ranks first among all Indian states in terms of number of factories and industrial workers, and has a diversified manufacturing sector. It is among the leading states in automobiles, components, textiles and garments, leather products, pharmaceuticals and other industries.
8. Major automobile manufacturers, such as Hyundai, Ford, Renault and BMW, have had production facilities in and around Chennai (the capital of Tamil Nadu) for years, and the Tiruppur-Coimbatore-Salem corridor has been dubbed the “Manchester of South India” due to its large cluster of textile firms.
9. This economic success has coincided with substantial progress on human development. Infant mortality has declined substantially and rates are now among the lowest in India. Malnutrition is also among the lowest in the country, and is below the national average for all income groups.
10. On education, children in Tamil Nadu are staying in school longer, and the share of adults with secondary schooling is above the national average.
11. Tamil Nadu's industrial policy has focused on a few key elements. First, the state has invested in infrastructure upgrading road, rail and port networks to enhance connectivity between its hinterland, industrial clusters and urban markets.
12. Tamil Nadu stands out in its parallel focus on social welfare policies, in the areas of public education, social security and healthcare. In addition to technical education, vastly increased the educational quota for disadvantaged communities, from 30% to 69%.
13. Tamil Nadu's state government has had a major influence on the state's development trajectory.
14. It has taken an open stance towards investment while simultaneously pursuing policies to ensure that broad swathes of the population could benefit; maintained policy consistency and commitment to industrialisation across changes in political leadership; and built up a bureaucracy that could implement its economic and social policies effectively.
15. Successive chief ministers of Tamil Nadu in the second half of the 20th century, crafted visions for development in the state that aimed to include disadvantaged groups in the economy and society through job-creating investment/industrial development and broad-based social programmes.

16. These same chief ministers maintained a commitment to industrial investment and development, as well as a consistent policy approach to encourage them despite alternating power with opposition parties.
17. Tamil Nadu's bureaucracy developed capabilities to effectively implement the state's inclusive development agenda, as the state's leadership diversified recruitment along socioeconomic lines; set out clear ideological foundations that bureaucrats associated with them could work from; and established nodal agencies to drive industrial development, such as TIDCO and SIPCOT.

21. வாஷ்மன் கமிட்டி (கிராமலாயா) என்பதை விளக்குக. அதன் நோக்கங்கள் மற்றும் கட்டமைப்பு பற்றி எழுதுக.

Explain Washman Committee (Gramalaya). Write about its Objectives and Composition.

1. Gramalaya has been involving the Community Based Organisations (CBOs) for implementing and monitoring of its all projects at both urban and rural areas
2. One of such CBO is called as WASHMAN Committee.
3. This committee consists of both Men and Women with a maximum no., 20 members.
4. They are allowed for the monthly savings and internal lending among themselves.
5. In this committees, the members who are volunteers of the project and selected by Gramalaya to extend their service for development of their village / slum by implementing WASHMAN approach.
6. These volunteers are nurtured by providing regular training and capacity building,
7. Visit to the role model villages, and handholding support at the field by Gramalaya.
8. These committees should ensure the sustainability and long lasting the Behavioral Change Communication (BCC) among the community members.

Objectives of the WASHMAN Committee:

1. To sustain the project goal by involving the community members through proper Behavior Change Communication.
2. To closely work with Government Departments, Elected PRIs members, Villagers, and other Civil Society Organization.
3. To monitor and facilitate the project deliverables even after closure of the project
4. To increase the Health of Women and Adolescent's Girls by promoting Re-usable cloth pads.
5. To ensure the protection of environment by proper usage of Re-usable cloth pads.
6. To declare the role model villages/ slums where 100% of the families who are using the Toilets / 100% of the women who are using re-usable cloth pads.
7. Members in the WASHMAN Committee:
 1. Self Help Group Members
 2. SHGs Federation
 3. VPRC members / Staff
 4. Sanitation Messengers
 5. Village Health Nurse
 6. School Teachers
 7. OHT operators
 8. Anganwadi workers
 9. Youth club members
 10. Other NGOs staff / volunteers
 11. Influencers in the community
 12. Leadership quality persons

13. Who have knows the scheme of Government

22. அரசு சாரா நிறுவனத்தை (NGO) வரையறுத்து மேலும் அதன் வகைகள் மற்றும் குடிமை சமூகத்தின் பங்கைப் பற்றி எழுதுக.

Define Non-Governmental Organization (NGO) and write about its types and role in civil society.

1. Non-Governmental Organisations (NGOs) are legally established non-profit organizations that works for social good and social justice.
2. **Types:** Community-based Non- Governmental Organizations (CBOs)
3. Local Non-Governmental Organizations
4. National level Non-Governmental Organizations
5. International NGOs
6. They have carved out a key role in civic society.
7. NGOs, with government assistance, focusing
8. Poverty alleviation
9. Casteism
10. Discrimination
11. Women's rights
12. Child labour
13. Rural development
14. Environment

Some of the NGO's functions in civil society:

1. Human rights and child rights
2. Poverty eradication
3. Animal Rights
4. Prevent Social Injustice
5. Conservation of Environment
6. Aged people care routine
7. Empowerment of women
8. Disease Control and others
9. Health and Nutrition plans
10. Conservation of Wildlife
11. Hygiene and Sanitation conditions
12. Humanitarian Relief

23. இந்தியாவில் மத்திய-மாநில நிதி சார்ந்த உறவை விளக்குக.

Explain Centre-State Financial Relation in India.

1. Articles 268 to 293
2. Part XII of the Constitution deal with Centre

Allocation of Taxing Powers:

1. The Constitution divides the taxing powers between the Centre and
2. The Parliament has exclusive power to levy taxes on subjects in the Union List
3. The state legislature has exclusive power to levy taxes on Subjects in the State List
4. The 101st Amendment Act of 2016
5. This Amendment has conferred concurrent Power upon Parliament and State Legislatures to make laws
6. The residuary power of taxation vested with parliament

7. Taxes Levied by the Centre but Collected and Appropriated by The States (Article 268) ex- stamp duties
8. Taxes Levied and Collected by the Centre but Assigned to the States (Article 269) ex – inter state trade
9. Levy and Collection of Goods and Services Tax in Course of Inter-State Trade or Commerce (Article 269-A)
10. Taxes Levied and Collected by the Centre but Distribute Between the Centre and the States (Article 270)
11. Taxes Levied and Collected and Retained by the States ex:excise duty on alcoholic products by humans
12. Distribution of Non-tax Revenues The Centre (i) posts (ii) railways;
13. The States - Public sector enterprises; Grants-in-Aid to the States
14. Statutory Grants -Article 275
15. Discretionary Grants Article 282
16. Goods and Services Tax Council
17. The smooth and efficient administration of the goods and services tax (GST) requires a co-operation and co-ordination between the Centre and the States.
18. 101st Amendment Act of 2016 provided for the establishment of a Goods and Services Tax Council or the GST Council.
19. Article 279-A empowered the President to constitute a GST Council
20. Finance Commission
21. Article 280: It is constituted by the President every fifth year or even earlier.
22. The distribution of the net proceeds of taxes to be shared Between the Centre and the states, and the allocation between.

Effects of emergencies:

1. National Emergency While the proclamation of national emergency (under Article 352)
 2. The president can modify the constitutional distribution of Revenues between the Centre and the states
 3. Financial Emergency While the proclamation of financial emergency (under Article 360)
 4. The Centre can give directions to the states
 5. Reserve all money bills and other financial bills for the consideration of The President.
24. கிராமப்புறங்கள், பழங்குடியினர் மற்றும் நகர்ப்புறங்களில் சமூக மேம்பாட்டுத் திட்டங்கள் குறித்து குறிப்பெழுதுக.

Write about Community Development Programmes in rural, tribal and urban areas.

1. The Community Development Programme (CDP)
2. The first major rural development programme
3. Launched in 2nd October 1952.
4. It constitutes the first organised effort at rural reconstruction.
5. The CDP was conceived as an instrument to transform the social and economic life of the village community as a whole cutting across caste, religious and economic differences.
6. It covered 55 projects with a wide range of programmes for developing agriculture, animal husbandry
7. Rural industries, education, housing, rural communication etc

Aims and objectives of CDP:

1. CDP intended to promote rural welfare through the improvement of education, public health and sanitation, medical facilities, housing, drinking water, hospitals, community centres and sports and cultural activities.
2. To secure total development of the material and human resources in rural areas.
3. To develop local leadership and self-governing institutions.
4. To raise the living standards of the rural poor by means of rapid increase in food and agricultural produce.
5. To ensure a change in the mind set of people instilling in them a mission for higher standards
6. It also aimed at encouraging community thinking and collective action.
7. To increase people's participation in developmental programmes.

Pradhan Mantri Gram Sadak Yojana (PMGSY):

1. **Launch:** 25th December, 2000.
2. **Objective:** To provide connectivity, by way of an all-weather road to unconnected habitations.

Urban programme:

1. AMRUT Mission
2. To ensure that every household has access to a tap with the assured supply of water and a sewerage connection.

Swachh Bharat Mission-Urban:

Aims at making urban India free from open defecation and achieving 100% scientific management of municipal solid waste in 4,041 statutory towns in the country.

HRIDAY:

1. The National Heritage City Development and Augmentation Yojana (HRIDAY)
2. Aims to bring together urban planning, economic growth and heritage conservation in an inclusive manner & with the objective of preserving the heritage character of the City.

Tribal development:

Integrated Tribal Development Project (ITDP):

1. Launched under the tribal sub-plan in the fifth five-year plan (1974-78).
2. To solving the local problems.
3. Elimination of exploitation
4. Improving Educational status
5. Reducing the Poverty
6. Improving the basic infrastructure such as Irrigation, schools, and hospital

25. சமூக தணிக்கை என்றால் என்ன? அதன் கோட்பாடுகள், முக்கியத்துவ மற்றும் வரம்புகளை விளக்குக.

What is Social Audit? Explain its Principles, Importance and limitations.

1. Social Audit is a process in which details of the resources, both financial and non-financial,
2. Used by public agencies for development initiatives and is shared with the people often through public platforms.
3. It includes in-depth scrutiny and analysis of the working of an programme

Principles of Social Audit:

1. **Multi-Perspective:** Reflect the views of all the stakeholders.
2. **Comprehensive:** Report on all aspects of the organisation's work and performance.
3. **Participatory:** Encourage participation of stakeholders and sharing of their values.
4. **Multidirectional:** Stakeholders share and give feedback on multiple aspects.
5. **Regular:** Produce social accounts on a regular basis so that the concept and the practice become embedded in the culture of the organisation covering all the activities.

6. **Comparative:** Provide a means whereby the organisation can compare its performance against benchmarks and other organisations' performance.
7. **Verified:** Social accounts are audited by a suitably experienced person or agency with no vested interest in the organisation.
8. **Disclosed:** Audited accounts are disclosed to stakeholders and the wider community in the interests of accountability and transparency.

Significance of Social Audit:

1. The main reason for the push for social audit is the huge disconnect between what people want and what people get
2. It exercises its control over the policy developers and implementers in the following manner
3. Reduces corruption: Social audit expose irregularities and malpractices in the public sector, oversight on government functioning, thus reducing leakages and corruption.
4. Monitoring and feedback: It monitors social and ethical impact of an organisation's performance and provides feedback on the work.
5. Accountability and transparency: working of local government bodies and reduces trust gap between people and local governments.
6. Participative and democratic: SA promotes participation of people in implementation of programmes and makes people more forthcoming for social development activities.
7. Strengthens the Gram Sabha: SA gives voice and influencing power to the Gram Sabha, the lynchpin of rural governance structure
8. Generates demand: Serves as the basis for framing the management's policies by raising demands in a socially responsible and accountable manner by highlighting the real problems.
9. Improves professionalism: SA boosts professionalism in public bodies by forcing Panchayats to keep proper records and accounts of the spending made against the grants received from the government and other sources.

Limitations of Social Audit:

1. The scope of social audits is highly localised and covers only certain selected aspects.
 2. Social audits are often sporadic and ad hoc.
 3. Monitoring is informal and unprocessed.
 4. The findings of social audit cannot be generalised over the entire population.
 5. Individual programs present their own unique challenges. For example literacy
 6. Program for adults require data on migration.
 7. Several problems require a package of programme to be implemented simultaneously. For example, rural health requires convergence between water supply, education, sanitation, nutrition etc. Social audit may therefore need a more holistic approach.
 8. Absence of trained auditors.
 9. Lack of action on audit reports and findings.
26. கிராம நிர்வாக அதிகாரியின் (VAO) கடமைகள் மற்றும் பொறுப்புகளை விமர்சன ரீதியாக பகுப்பாய்வு செய்க.

Critically analysis Duties and Responsibilities of Village Administrative Officer (VAO).

1. Maintenance of Village records like Chitta, Chalan Register,
2. Settlement Register, Register of Rights, Collection Accounts, Receipt And Dispatch Book
3. Processing of applications for Mutation and Furnishing report
4. Inspection of the lands.
5. Maintenance of Crop Register (Adangal) and inspection of all the Lands
6. Inspection of scenes of fire accident/other calamities and furnishing Report for relief.

7. Assisting in the relief operation during occurrence of Natural Calamities like floods, fire accident, etc.
 8. Furnishing land particulars in respect of lands proposed for other Departments.
 9. Service of various notices from Taluk office intended for public in the Village.
 10. Conduct of enquiry into various Kinds of petitions submitted by the Public to higher authorities.
 11. Assisting higher Officials in times of law & order, elections, Census
 12. Periodical inspection of encroachments and furnishing report
 13. Levy of penalties.
 14. Periodical supervision of Irrigation sources.
 15. Maintenance of Lease Register for Government lands.
 16. Issue of basic report for various certificates like Residence, Income, Caste etc.
 17. Furnishing of basic statistics on land for other Departments
 18. VAO is responsible for collecting Land tax, Panchayat Taxes and other dues
 19. VAO is responsible and maintain peace in Village, he should inform any violence, unnatural death, caste fight, encroachment, Natural calamities, etc to the Higher Officials.
 20. Issuing Chitta and Adangal for obtaining loan from Co-Operative Societies and other banks.
 21. He is responsible of Issuing Certificate to farmers various loans after inspecting recors and enquiry on Ground reality.
 22. He Maintains all the accounts relating to cultivation, irrigation etc.
 23. In Total VAO is responsible person for particular Village in all matter.
 24. Gathering of vital field level data useful for various departments such as Below Poverty Line (BPL) survey for Civil Supplies and Consumer Affairs Department.
27. மத்திய மாநில உறவுகளில் அரசியலமைப்பு மற்றும் கூடுதல் அரசியலமைப்பு சாதனங்களின் பங்கினை விளக்குக.

Explain the role of constitutional and extra constitutional devices on centre state relations.

Finance Commission:

1. Article 280 of the Indian Constitution defines a quasi-judicial body to supervise the government's finances
2. It recommends shares financial resources between union and state

Inter-state council:

1. Art 263 contemplates the establishment of an inter-state council to effect coordination between the states and between centre and states ex: local government council
2. The President can establish such a council at any time it appears to him that public interest would be served by its establishment.
3. According to Article 262, in case of disputes relating to waters:
4. Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley.
5. Parliament may, by law provide that neither the Supreme Court nor any other court shall exercise jurisdiction in respect of any such disputes
6. Ex – cauvery water dispute tribunal

Inter-State Trade and Commerce:

Articles 301 to 307 in Part XIII of the Constitution deal with the trade, commerce and intercourse within the territory of India.

GST council:

1. The establishment of a Goods and Services Tax Council, or GST Council, to facilitate this consultation process

2. The amendment to the Constitution (101 Constitutional Amendment Act) added a new Article 279A

State public service commission Art. 315:

1. Chairman and members appointed by governor

2. Removed by president

State election commissioner Art.243:

1. Appointed by governor

2. Removed by president

Extra-Constitutional Devices:

1. Advisory/Policy Making bodies: NITI Aayog, NIC,

2. Zonal Councils under state reorganisation act 1956

3. North eastern zone (North eastern zonal council act 1971)

4. Central Council on Health,

5. Central Council on Local Govt

6. Central Council on Medicine

7. Central Council of Homeopathy,

8. Central Family Welfare Council, Transport

9. Development Council, UGC

10. Conferences: Governors, CMs, CSs, DGPs, CJoH, VCs, Home/Law Ministers.

28. நிதி ஆணையத்தின் பங்கு மற்றும் செயல்பாடுகளை விளக்குக.

Explain the role and functions of Finance Commission.

1. The Finance Commission of India is a constitutional body that is established for the Purpose of allocating and distributing the tax revenues among the centre and states

2. Article 280 of the Indian Constitution provides for the Finance Commission as a Quasi-judicial body

3. The Finance Commission is constituted by the president every 5 years once

4. Fifteenth finance commission chairman – N.K.Singh in November 2017,

Functions of Finance Commission:

The Finance Commission is supposed to recommend the following matters to the President of India:

1. The distribution of the net proceeds of taxes should be shared among the centre and the states.

2. The principles that govern the grant-in-aid by the central government to the state Government are out of the consolidated fund.

3. Any matter referred to which is in the interest of sound finances by the President of India.

4. The measures required to extend a state's consolidated fund to supplement the Resources of the panchayat and municipalities in the state

5. On the basis of Recommendations made by the state Finance Commission.

6. The Finance Commission decides its own procedure and enjoys power in the Performance of its function.

7. Every 5 years, the Finance Commission determines the grounds for the Distribution of taxes among the centre and states as well as the principles governing the Grant-in-aid to the states.

8. The members of parliament received the Finance Commission's recommendation and an explanatory memorandum of the actions taken by the government.

Role of Finance Commission:

1. The recommendations which are made by the Finance Commission of India are just Advisory in nature
2. Not binding on the government. It is totally up to the central Government to either implement its recommendations or grant the money to the states.
3. It would be right to say that it is not written or laid down in the Constitution
4. That the recommendations put up by the Finance Commission is not binding on Government of India
5. The constitution of India oversees the Finance Commission to be the balancing Wheel of fiscal federalism in India.

29. ஒன்றிய அரசாங்கத்தின் ஜல் ஜீவன் திட்டத்தை பகுப்பாய்வு செய்க.

Critically analyze the Jal Jeevan Scheme of Union Government.

1. Taking a cue from previous water supply projects, the Jal Jeevan Mission focuses on water service delivery rather than just providing water supply infrastructure.
 2. Under JJM, every household irrespective of its socio-economic status is assured of piped water supply.
 3. (JJM)-Jal Jeevan Mission is built on the principle of 'no one left behind' for the poor, needy and marginalized sections of the society.
 4. Ensures piped water supply to the unserved at their homes.
 5. Ensuring access to potable water at home will save older women and young women across rural India. This will improve their health, education and socio-economic conditions.
 6. Also, piped water connection in every rural house gives dignity to the people.
 7. It reduces the urban-rural gap and makes 'life easier' in accessing safe water.
 8. To achieve this ambitious goal of providing piped water to every rural household within a short span of five years, the government has earmarked Rs.3.60 lakh crore.
 9. Rs.11,000 crore allocated to States/Union Territories in 2020-21.
 10. Union Minister Jal Shakti, Shri Gajendra Singh Shekhawat has approved four times the allocation for the year 2021-22 i.e. the current financial year.
 11. There is no dearth of funds required to achieve the goal. In just three months, states/UTs have drawn Rs 8,891 crore based on proposed fund utilization and requirements under their Annual Action Plans (AAPs).
 12. In the year 2021-22, Rs.26,940 crore has been allocated to the states through the 15th Finance Commission as subsidy for water and sanitation to rural local bodies/PRIIs.
 13. A financial assistance of Rs.1,42,084 crore will be provided for the next five years i.e. till 2025-26.
 14. This massive investment in rural areas across the country will accelerate economic activity and boost the rural economy. Creating new employment opportunities in villages.
 15. Jal Jeevan Mission is a 'bottom-up' approach in which the community plays an important role starting from planning to implementation, management, operation and maintenance.
 16. To achieve this, strengthening of State Government Village Water and Sanitation Committee (VWSC)/ Working Committee, formulation of Village Action Plan for next five years.
 17. Support activities such as activation of State Agencies (ISAs) should be undertaken to deal with and support rural communities. , and create awareness among people.
 18. So far 2.67 lakh VWSCs or Working Committees have been set up and 1.84 lakh Village Action Plans have been developed across India.
30. 74வது அரசியலமைப்பு திருத்தச் சட்டத்தை விரிவாக விளக்கவும்.

Explain 74th Constitution Amendment Act in detail.

Objectives:

1. 74th Constitution Amendment Act
2. This act gave constitutional status to municipalities. It has brought them under the reasonable provisions of the Constitution.
3. In other words the State Governments have a constitutional obligation to implement the new municipal system as per the provisions of the Act.
4. The objective of this Act is to revitalize and strengthen municipal governments so that they can function effectively as units of local government.

Constitutional Provisions:

1. It was passed by Parliament in December 1992 and came into force on 1 June 1993 by adding Part IX A (Articles 243-P to 243-ZG) and the 12th Schedule to the Constitution.
2. The 74th Amendment gave uniform legislation to all municipalities in the country.

Key Features:

1. Three types of municipalities
2. The Act provides for the constitution of the following three types of municipalities in each state.
 - i. A Nagar Panchayat (by whatever name) for an intermediate area.
 - ii. A municipal council for a small urban area.
 - iii. A municipal corporation for a large urban area.

However, there is an exception, if there is an urban area where municipal services are provided by an industrial enterprise, the governor may designate the area as an industrial city. In that case, the municipality cannot be constituted.

Composition:

1. All members of a municipality are directly elected by the people of the municipal area.
2. For this purpose each municipal area is divided into regional blocks known as wards.
3. The State Legislature may provide for the method of electing the Chairperson of a municipality.

Reservation:

1. In every municipality reservation is given to SC and ST in proportion to their population.
2. Reservation of 1/3rd of the total number of seats is also given to women.
3. The State Legislature is empowered to make any provision for reservation in the municipality at any stage in favor of backward classes.

Duration:

1. Municipalities are given a five-year tenure at each level. However, it may be dissolved before the expiry of its term.
2. If the municipality is elected after its dissolution, it will continue for the remainder of the term of existence of the dissolved municipality if it had not been dissolved.

Powers and Functions:

1. The powers and functions of Municipalities are conferred by the State Legislature.
2. Municipalities prepare plans for economic development and social justice for the people of the municipality.
3. It implements central and state government programs for the upliftment of people at grassroots level.
4. Municipalities have power to improve employment facilities and undertake development

activities in the area.

31. பெண்கள் மேம்பாட்டிற்காக தமிழக அரசு செயல்படுத்தும் திட்டங்களை விளக்குக.

Explain the schemes implemented by Tamil Nadu Government for the development of women.

1. Muvalur Ramamirtham Ammaiyar Memorial Marriage Assistance Scheme – Financial assistance to poor parents to get their daughters married and to improve the educational status of poor girls.
2. Dharmambal Ammaiyar Memorial Widow Remarriage Assistance Scheme – To encourage widow remarriage and rehabilitate widows.
3. E.V.Ra Maniammaiyar Memorial Marriage Assistance Scheme for Daughters of Poor Widows - To assist poor widow mothers who are financially challenged in conducting their daughter's marriage by providing financial support for the marriage of their daughters.
4. Mother Teresa Memorial Marriage Assistance Scheme for Orphan Girls – To provide financial assistance for the marriage of orphan girls.
5. Muthulakshmi Reddy Memorial Inter-Caste Marriage Assistance Scheme – to eliminate caste and social sentiments based on birth and to eradicate discrimination by promoting inter-caste marriage.
6. Government Service Home – To provide institutional care to economically and socially backward widows, destitute, abandoned women, adolescent girls and differently-abled women by providing protection, education and vocational training.
7. Sathyavani Muthu Ammaiyar Memorial Free Sewing Machine Scheme – Sewing machines are provided free of cost to destitute women/widows, abandoned wives, differently abled men and women, other socially disadvantaged women and economically weaker sections to increase self-employment opportunities.
8. Pension Scheme for Indigent Transgenders – To uplift the livelihood of poor and destitute transgenders above 40 years of age.
9. Sathya Ammaiyar Memorial Government Children's Homes - Providing education to destitute, abandoned and abandoned children through free food, clothing, shelter and medical facilities.
10. Chief Minister's Girl Child Protection Scheme.
 - a. Promotion of girl child education.
 - b. Elimination of female infanticide.
 - c. Encouraging preference for girl child.
 - d. Promotion of small family size.
 - e. To improve the welfare of girl child in poor families and uplift the status of girl child.
11. Child Adoption Program – Providing a family to orphaned, abandoned, and neglected children.

32. கையால் மலம் அள்ளுபவர்களின் அவல நிலையை ஒழிக்க தேசிய மனித உரிமைகள் ஆணையம் அளித்துள்ள முக்கிய பரிந்துரைகளை பட்டியலிடுக.

List out the main recommendations made by the National Human Rights Commission to alleviate the plight of manual scavengers.

1. Expanding its definition or enacting new legislation to bring other types of hazardous sanitation work under the category of manual scavenging. A new penal section may be put into law to prevent oppression and harassment faced by women and children who defecate with their hands.
2. For the rehabilitation of manual scavengers they can be immediately linked with schemes like

MNREGA and start earning and review to know how they and their families benefit.

3. Compensation: One time cash compensation for rehabilitation of manual scavengers Rs. 40,000/- to Rs. 1 lakh. The principal officer bearing the cost of such compensation may be clearly mentioned in the department.
4. Elimination of the role of middlemen can be ensured by making arrangements like direct cash transfer or collaboration with NGOs.
5. Strict action against local authorities employing manual scavengers: Launching of application and toll-free number for registering complaints.
6. The National Crime Investigation Agency (NCRB) may track sewage treatment related deaths and related data in its report.
7. The Union Ministry of Finance may designate a specific nationalized bank for each state; Through this manual scavengers and their dependents will get Rs. 10.00 lakhs can be undertaken to extend loans.
8. Individual or group insurance should be provided to manual scavengers and the installments should be paid by the local bodies concerned.
9. National Safai Karamcharis Fund and Development Corporation (NSKFDC) can provide general financial assistance in cleanliness and training to hand scavengers.
10. Government of India should plan adequately to facilitate investments in moving towards technology-based sanitation. Also, workers should be trained to operate the technology.
11. Establish an awareness committee and a monetary mechanism.
12. A specially trained Police Investigating Officer should be appointed.

33. தமிழ்நாடு: மருத்துவச் சுற்றுலாவக்கான முன்னணி இலக்கு - விவரிக்க.

Tamil Nadu: The Leading Destination for Medical Tourism – Illustrate.

- 1) Tamil Nadu is one of the pioneers of medical tourism in India. First in 1978 Pharmaceutical Manufacturing Park.
- 2) Attracting a good number of international health tourists, the state has always been a major hub for medical diagnosis and treatment.
- 3) It ranks first in the country in terms of number of vaccinated children and boasts of thousands of eminent medical practitioners specializing in various fields of medicine.
- 4) More than 15 lakh patients visit Tamilnadu annually for medical diagnosis and treatment.
- 5) Tamil Nadu has the best infrastructure in the country for medical tourism.(Chennai-Medical Capital of India)
- 6) It has more than 12,500 hospital beds, about 10 lakh registered doctors, 48 government-run medical colleges and hospitals; and hundreds of private specialty and multi-specialty hospitals.
- 7) Besides, there are 1,491 Indian system hospitals and hundreds of Ayurvedic, Siddha, Unani and Homeopathic resources.
- 8) In support of these there are 84 pharmaceutical colleges and around 400 pharmaceutical manufacturing companies in the state.
- 9) Considering the importance of medical tourism, Department of Tourism in association with hospitals established Medical Tourism Information Center at Tamil Nadu Tourism Complex and Travel Desks in Chennai and Madurai.
- 10) A core committee consisting of medical experts and Directorate of Medical Education monitors the system.
- 11) Tamil Nadu is also a center of traditional Indian healing systems.
- 12) Siddha system, one of India's oldest systems of medicine, began in its present form in Tamil Nadu in the 16th century (although the oldest text that mentions it is the 6th or 7th century Thirumantram by

Tirumular).

- 13) The word 'siddha' means 'achievements' and the eighteen siddhas were saints who contributed to the development of this system of medicine.
- 14) Tamil Nadu has always been a major hub for medical diagnosis and treatment and now serves as a hub for medical services.
- 15) With the abundance of excellent hill resorts, Tamil Nadu has great potential to further expand the structure of health tourism and establish itself as a Siddha and health tourism destination.
- 16) Apart from hospitals, home healthcare and home nursing are also excellent in Chennai.
- 17) Medical tourists who need to recover after treatment may avail such facilities and respite and palliative care.
- 18) Lead in Medical index (IMR, MMR) in India compared to other states.
- 19) State leading in Transplant Organ Surgery in India.
- 20) TICEL Zoo is situated.
- 21) Medical Devices Manufacturing Park is located at Kanchipuram to increase production of medical devices.

34. இந்தியாவின் முக்கிய தொழில்துறைகளை விவரிக்க.

Enumerate the major Industries of India.

Places where raw materials are converted into manufactured goods by machines are called industries.

Agro based industries

1) Weaves:

Weaves are the place where cotton, jute, wool, silk and synthetic fibers are produced. With over 50 million spinning machines, 842000 spinners and 3400 looms, India is the second largest in the world in this sector.

2) Cotton Weaves:

1. Traditional industries like handlooms, handicrafts, small power looms etc. are sources of employment for lakhs of rural and peri-urban people. Cotton textiles account for 7 percent of industrial production, 2 percent of India's GDP, and 15 percent of export earnings. The sector is one of the largest sources of employment in the country. Presently there are 1719 cotton looms in India. Out of these 188 looms are public sector enterprises, 147 are co-operatives and 1284 looms are private sector enterprises.
2. Presently India is the third largest producer of cotton in the world. It is the leading country in the number of looms and spinning tools. Currently, cotton weaving is the largest modern industrial sector in India. The sector accounts for 16 percent of industrial capital and 14 percent of industrial output and employs 20 percent of the workforce in these industries.
3. Cotton mills in Mumbai and its suburbs. Mumbai is known as the "Manchester" of India because of its abundance. The karisal soil found in the state of Maharashtra, humid climate, Mumbai port, easy availability of hydroelectric power, market facility and good transport facility are the reasons for the large number of cotton weaving mills in Mumbai.
4. Maharashtra, Gujarat, West Bengal, Uttar Pradesh and Tamil Nadu are the states where cotton weaving is concentrated. Coimbatore in Tamil Nadu has the largest number of cotton weaving mills. Thus Coimbatore is known as the "Manchester" of South India. Out of 435 handlooms in Tamil Nadu, 200 handlooms are located in Coimbatore. Erode, Tirupur, Karur, Chennai, Tirunelveli, Madurai, Thoothukudi, Salem and Virudhunagar are other important weaving towns of the state.

3) Jute mills

1. Jute is the cheapest available fiber. It is used to make shells and sacks.
2. Nowadays jute is woven together with cotton and wool. India alone accounts for 35% of the world's total production of jute products. Jute mills are the second largest textile industry in India after cotton mills. Natural hemp is also known as the "golden fiber crop" because it is renewable, biodegradable, and eco-

friendly.

3. India's first jute mill was started in 1854 by Englishman George Auckland at Rishra near Kolkata. India is the largest producer of jute and the second largest producer of jute products after Bangladesh. Jute is used to make bags, tent cloths, slippers, carpets, curtains, ropes, cloths, footstools etc. Currently, fur is mixed with flexible furniture such as insulated covers.
4. Also these are mixed with cotton to make blankets and carpets. Jute production areas are located along the Hooghly River in West Bengal. Dittagarh, Jagatat, Budge-Budge, Howrah and Bhadreswar are the main jute product manufacturing centres. Andhra Pradesh, Bihar, Assam, Uttar Pradesh, Chhattisgarh and Odisha are other jute producing states.

4) Silk weavings

1. India has been famous for silk production since ancient times. India ranks second only to China in silk production. Sericulture is an industrial sector and provides employment to 7.56 million socially disadvantaged people.
2. The state of Karnataka produces an average of 8,200 metric tons of silk every year. It is the leading state in India producing 1/3rd of the country's total output. West Bengal, Jammu and Kashmir, Bihar, Jharkhand, Chhattisgarh, Uttar Pradesh, Punjab, Assam and Tamil Nadu are significant silk producers. India exports silk fabrics, silk shawls, silk dresses and silk sarees. Exports to the United States, United Nations, Saudi Arabia, Kuwait and Singapore.

5) Sugar factory

1. Sugar is produced from sugar-containing crops like sugarcane, sugar-beets. Sugar in India is mostly extracted from sugarcane. It is the second largest agro-based industry after cotton weaving. Brazil is second in world sugarcane production India ranks second. It provides employment opportunities to 2.86 lakh workers. Sugarcane is easy to lose weight. These industrial roads are located close to sugarcane growing areas as they are heavy for traffic.
2. Uttar Pradesh tops the total sugar production of the country with 50 percent. Maharashtra, Karnataka, Andhra Pradesh, Tamil Nadu, Bihar, Punjab, Gujarat, Haryana and Madhya Pradesh account for 90 percent of the sugar mills and producing states.

6) Forest based industries

Forests provide raw materials for paper industries, skis, sports goods, plywood etc.

7) Paper mills

1. Paper industry has emerged as a decentralized and unique industry in India. Paper sheets, paperboards, laminated sheets, paper bags, stationery, texts and printed paper products such as books, magazines and journals are produced by paper mills.
2. Softwoods are used as raw materials for the production of high quality printing papers and newsprint. Paper usage is a tool for measuring the overall well-being of society for educational and non-academic use.
3. The first Royal Bengal Paper Mill in India was established in 1867 at Ballyganj near Kolkata. Next paper mills were established in Lucknow in 1879, in 1882 in Phettagarh, in 1887 in Poona, in 1892 in Raniganj, in 1892 in Kankinara and in 1918 in Naigam. Wood pulp, bamboo, salai and sawai grasses, used paper, sugarcane bagasse etc. are the raw materials required for paper industry. West Bengal is a major paper producing state in India. Madhya Pradesh, Orissa, Tamil Nadu etc. are significant paper producing states.

8) Mineral industries

1. These industries use both metallic and non-metallic raw materials. Iron and steel industry is an important mineral industry.
2. Iron and steel industries
3. Iron and steel industries are known as base metal industries as their products provide raw material to other industries. Industries that manufacture engineering, heavy machinery, machine tools, vehicles,

locomotives and railway equipment use iron as raw material. Industrial development of a country is determined by the amount of iron and steel production.

4. Tata Iron and Steel Factory was the first modern factory started in Jamshedpur in 1907 called "Saxi". Jharkhand, West Bengal, Odisha are more common in the states. This is due to the proximity to each other of the Jharia Raniganj, Bokaro and Karanpura coalfields and the Mayurbhanj, Ionjar and Purena iron ore mines. Mineral deposits such as dolomite, manganese and silicon required for this industry are available here in sufficient quantity.

9) Automotive industries

1. India is progressing in automobile manufacturing to meet the demand of the domestic automobile market and also to play a major role in the global automobile market. It is one of the fastest growing industries in India.
2. India's first automobile industry was started in 1947 at Kurla near Mumbai under the name of Premier Automobile Company. Following this in 1948 Hindustan Motor Company was started at Uttarpara near Kolkata. Currently, India is the seventh largest automobile manufacturing country. The company manufactures two wheelers, recreational vehicles, jeeps, three wheelers and commercial vehicles. Mumbai, Chennai, Jamshedpur, Jabalpur, Kolkata, Poona, New Delhi, Kanpur, Bengaluru, Satara, Lucknow and Mysore are major manufacturing hubs.
3. Companies like Tata Motors, Maruti Suzuki, Mahindra & Mahindra Hindustan Motors are Indian companies that manufacture large passenger cars. Multinational companies established in India such as Mercedes, Benz, Fiat General Motors, Toyota and recently entered India, BMW. Audi, Volkswagen and Volvo have made Indian automobile manufacturing even more special.
4. Indian companies that manufacture commercial vehicles are Tata Motors, Ashok Leyland, Iser Motors, Mahindra & Mahindra and Ford Motors. Multinational companies such as MAN, ITEC, Mercedes-Benz, Scania and Hyundai also manufacture commercial vehicles. Indian companies such as Hero, Bajaj Auto and TVS are leading manufacturers of two-wheelers.
5. The automotive industry in India can be seen in four clusters. They are North E Delhi Gurgaon and Manesar in India, Pona, Nashik, Halol and Olarangabad in West India, Chennai, Bengaluru and Hosur in South India, Jamshedpur and Kolkata in East India.

10) Electrical and Electronics Industries:

1. Heavy electrical industries manufacture equipment for power generation, transformers, steam boilers, conductors for hydroelectric power plants, boilers for thermal power plants, generators, transformers and switchgears. One of the most important heavy machinery manufacturers in India is Bharat Heavy Machinery (BHEL). The company has branches at Haridwar, Bhopal Hyderabad, Jammu, Bengaluru, Jhansi and Tiruchirappalli.
2. The company manufactures television sets, radio sets, telephone sets, cellular telegraphs, computers and various equipments required for the fields of postal, railway safety, meteorology etc.
3. Bengaluru is the largest electronics manufacturing city in India. Hence Bengaluru is known as the "Electronic Capital of India". Other major electronics manufacturing centers are Hyderabad, New Delhi, Mumbai, Chennai, Kolkata, Kanpur, Poona, Lucknow, Jaipur and Coimbatore.

11) Software industry

1. India is home to some of the best software companies in the world. Indian software industries are world renowned for providing IT and business solutions. Indian software industry has been a huge success in Indian economic development.
2. Tata Consultancy Services is India's first software industry. It was started in 1970. Along with this, L&T, Infotech, J-Plex, Asigner, Cognizant Galaxy Solutions, India Pvt Ltd JTC, Infotech etc are important software companies in India. Currently, there are more than 500 software industries across India. These

companies provide software export services to around 95 countries of the world.

3. Chennai, Coimbatore, Thiruvananthapuram, Bengaluru, Mysuru, Hyderabad, Visakhapatnam, Mumbai, Poona, Indore, Gandhinagar, Jaipur, Noida, Mohali and Srinagar are the major software hubs in India.

35. தகவல் அறியும் உரிமைச் சட்டம், 2005.-விளக்குக.

Elucidate -Right to Information act, 2005.

The Right to Information Act - 2005 came into force from October 2005. This comes under Article 19 of the Constitution of Fundamental Rights. Central and State Information Commissions will be set up under the Right to Information Act.

Purpose:

- 1) Granting to the people, as a fundamental right, the right to access information from government officials in all parts of the country
- 2) To bring transparency in the functioning of government officials
- 3) To check corruption, appointment of Public Information Officer (PIO) in government offices.
- 4) Ensuring that government departments and institutions are accountable to the people
- 5) A practical format is given to provide information to the people.
- 6) Repeal of Government Documents Secrecy Act 1923 which prohibits disclosure of information to the public

Jurisdiction:

All kinds of offices created by the Central, State and Union Territory Governments either on their own or directly or through financial assistance are covered under this Act.

The information is:

Includes records, documents, office memos, email, comments, suggestions, information - data.

Registers are:

- 1) All kinds of documents, manuscripts, files
- 2) Microscroll, photocopy, copies of registered document
- 3) Documents produced by devices such as computers

Right to Information means:

- 1) Right to inspect works, documents, records
- 2) Right to receive notes, summaries etc
- 3) Right to take samples
- 4) Do not deny information to Parliament and Legislature.
- 5) Do not deny information to law making bodies at any time.
- 6) Applicant should be informed within 30 days. Information related to life and personal freedom should be given within 48 hours.

Secrets to be protected:

Sovereignty, integrity, security, economic (m) scientific interests of the country, foreign affairs information etc. are to be protected.

Exception:

Intelligence

Private companies are not covered under the Act

36. இந்தியாவின் மத்திய தலைமை தணிக்கையாளர் அதிகாரங்கள், அமைப்பு முறை மற்றும் செயல்பாடுகளை விளக்குக.

Illustrate power, structure and functions of Comptroller and Auditor General of India.

CAG of India is the apex authority responsible for external and internal audits of expenditure of national and state governments and is a constitutional office under Article 148 of the Constitution.

Powers of the Auditor General of India

1. The Comptroller and Auditor General is appointed by the President of India and can be removed from office only in the manner and on the basis of removal of a Judge of the Supreme Court.
2. The person appointed to this office shall take the oath of office before the President or any other person designated by the office of the President.
3. The pay, conditions of service, leave, pension and age of retirement are determined by the Parliament of India and are specified in the Second Schedule.
5. The CAG shall not be eligible for any post in the Government of India or any State Government after the expiry of their tenure.
6. The powers and functions of the CAG are subject to the provisions of the Constitution of India and any Acts of Parliament and the conditions of service of the Indian Audit and Accounts Department. Rules governing these shall be prescribed by the President in consultation with the incumbent.
7. The expenses of the administration of this office, including all allowances, salaries and pensions, shall be charged to the Consolidated Fund of India.
8. The incumbent shall be appointed for a period of 6 years or till he attains the age of 65 years whichever is earlier. Not bound by any ministry.

Functions of CAG of India:

1. To audit the accounts relating to all expenditure drawn from the Consolidated Fund of India, the Consolidated Fund of each State and the Consolidated Fund of each Union Territory having a Legislative Assembly.
2. Audit of all expenditure from the Contingent Fund of India and Public Accounts of India and from the Contingent Fund and Public Accounts of the States.
3. Audit of all trading, production, profit and loss accounts, balance sheets and subsidiary accounts of any department of the Central Government and State Governments.
4. Audit of the receipts and expenditure of the Government of India and of each State, and the rules and procedures relating thereto are designed to secure an effective check on the assessment, collection and proper allocation of revenue.
5. Auditing receipts and expenditure of: All bodies and authorities substantially financed from Central or State revenue; Government Institutions; and other organizations and bodies when required by relevant laws.
6. Audit of all transactions of Central and State Governments relating to credit, sinking fund, deposits, advances, suspense accounts and remittance business. He audits the receipts, stock accounts and others with the approval of the President or when required by the President.
7. To audit the accounts of any other authority when requested by the President or the Governor. For example, audit of local bodies.
9. To advise the President on the recommendation of the form in which the accounts of the Union and the States shall be kept (Article 150).
10. Submission of audit reports on the accounts of the Central Government to the President, who shall lay them before both Houses of Parliament (Article 151).
11. Submission of audit reports relating to the accounts of the State Government to the Governor, who shall lay them before the State Legislature (Section 151).
12. He is a consultant to Parliament and PAC (to the Public Accounts Committee of the Legislature).
13. Examines the accounts of the Local Bodies on the request of the President and the Governor.
14. He submits an annual report on the accounts to the President and the Governor of the State.



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UNIT – III - (Question & Answer)

6 MARKS = 6 to 7 POINTS
12 MARKS = 12 to 14 POINTS
15 MARKS = 15 to 17 POINTS

- ✓ எளிமையான வாக்கிய அமைப்பு தேவை
- ✓ நீளமான வாக்கிய அமைப்பை தவிர்க்க வேண்டும்.
- ✓ விடைத்தாளில் கொடுக்கப்பட்ட இடைவெளிக்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ தனித்துவமான விடையை எழுதுவதற்கு பயிற்சி செய்யவும்.
- ✓ கால மேலாண்மையை கருத்தில் கொள்ளவும் 3 மணி நேரத்திற்குள் விடையை எழுதி முடிக்க வேண்டும்.
- ✓ SCERT பாட புத்தகங்களுக்கு அதிக முக்கியத்துவம் கொடுக்கவும், தேவை ஏற்படின் பிற பாட புத்தகங்களையும் பார்க்கவும்.
- ✓ முதன்மை தேர்வு தொடர்பான TNPSC அறிவுறுத்தல்களை கருத்தில் கொள்ளவும்.

(6 MARKS)

1. சமீபத்தில் தொடங்கப்பட்ட SIRPI திட்டம் பற்றி எழுதுக.

Write about the recently launched SIRPI Scheme.

- ✓ Commencement: On 14.09.2022 at Kalaiwanar Arangam, Chennai on behalf of Chennai Metropolitan Police School, students to excel in discipline and education.
- ✓ A new scheme called 'SIPI' (Students in Responsible Police Initiatives) has been launched to develop good character among the patriots and guide them.
- ✓ In Tamil Nadu, the government of Tamil Nadu is implementing various schemes to ensure law and order in a better way and for the public to live peacefully without fear.
- ✓ “Sculptor” program has been launched with the lofty aim of building rapport and camaraderie among the school students with the police and making them better law abiding citizens and true friends of the police.
- ✓ Students studying in the school should excel in academics, excel in morals and develop good character without getting involved in law and order problems.
- ✓ Make them good without getting addicted to bad habits including drugs.
- ✓ To nurture them so that they can teach others the education and morals they have learned.
- ✓ Coordinating officers appointed through this scheme.
- ✓ Students are taught virtue, virtue, patriotism, general knowledge, exercises, yoga etc. to keep the body healthy.
- ✓ In the first phase, 100 government schools will be selected and 50 students of 8th standard from those schools will be selected as volunteers and they will be given classes on virtues and fitness.

- ✓ Students will be taken to 8 tourist spots and taught about education, history and general knowledge.
- ✓ Sports training, fitness and marching will also be taught.
- ✓ Activities and organization of police to support peaceful life of selected students.
- ✓ About the work, Emergency Help Centers and their functions, and about the functions of Chennai Metropolitan Police Department will be discussed.

2. பொது முக்கடந்தி MGNREGA வேலைவாய்ப்பு உத்தவாத்திபம் மக்களுக்கு வவறு உதவியது?

How employment Guarantee schemes like MGNREGA helped people during challenging time like general lockdown?

- ✓ Rural employment.
- ✓ Cooperation in agricultural activities.
- ✓ Development of rural infrastructure.
- ✓ Biggest benefit of covid total lockdown is- 40000 crore allocation increased.
- ✓ Provides income in non-seasonal environment.
- ✓ Beneficial to workers who get placement.
- ✓ Beneficial to unskilled and informal sector workers.
- ✓ Empowerment of women.
- ✓ Good solution during economic recession.
- ✓ Repair and maintenance of infrastructure

3. மக்கள் தொகை பிரமிடு என்றால் என்ன? மக்கள் தொகை பிரமிடின் பயன்கள் என்ன?

What is population Pyramid? And what are the uses of population Pyramid?

Population Pyramid:

- ✓ A population pyramid is a graphical representation of population distribution by sex and age.
- ✓ As population increases it takes a pyramidal shape. Population pyramids are also called age pyramids because it is a graphical representation of age.
- ✓ A population pyramid is a graphical representation that demonstrates the distribution of ages across a population.
- ✓ It is divided from the center between male and female individuals. Males are shown on the left and females on the right from the center of the diagram.

Applications of Population Pyramid:

There are many different uses of the population pyramid

- ✓ It tells about the composition of population of any particular area
- ✓ It tells about the number of dependent individuals (children, elderly) in any area
- ✓ It tells us the gender differences of any region.
- ✓ It also tells about death rate and fertility rate
- ✓ Use data to infer future growth of population.

4. மக்கள் தொகை ஈவுத்தொகை மற்றும் மக்கள் தொகை அடர்த்தி பற்றிய சிறு குறிப்பை எழுதுக.

Write a short note on Demographic Dividend and Population density.

- ✓ Potential for economic gains when the share of the working age population (15 years - 64 years) is greater than that of the non-working age population.
- ✓ A population dividend occurs when the proportion of working people in the total population is high,
- ✓ It implies that more people have the capacity to contribute to the productivity and growth of the economy.
- ✓ Many argue that because of the dividend between the young and the old, there is great potential for economic gains,
- ✓ This is known as “Population Gift”.
- ✓ For economic growth to occur, young people need access to health, including quality education, adequate nutrition, and access to sexual and reproductive health.

- ✓ A demographic dividend takes place when a country undergoes a demographic transition from a rural agrarian economy with high fertility rates to an urban industrialized economy with low fertility and death rates.

Population density:

- ✓ Population density is the number of persons living per square kilometer.
- ✓ It is calculated out of 1000.
- ✓ According to the 2011 census, the average population density in India is 382 persons per square kilometer.

5. தமிழ்நாட்டில் எந்த வகையான வேலையின்மை நிலவுகிறது மற்றும் அதற்கான காரணங்கள் யாவை?

Which type of Unemployment prevalent in Tamilnadu and what are the reasons for it?

- ✓ Structural unemployment is high in Tamil Nadu. This unemployment arises when there is a mismatch between the skills of the worker and the availability of jobs in the market.

Reasons for unemployment:

- ✓ Mismatch of skills
- ✓ Lack of experience
- ✓ Bad economy
- ✓ Market changes
- ✓ Technological changes

6. இந்தியாவில் வேலையில்லாத தீண்டாபத்தை ஒழிப்பதற்கான முக்கிய தடைகள் யாவை?

What are the major barriers to eradication of unemployment problem in India?

- ✓ Increase in population.
- ✓ Caste system.
- ✓ Inadequate economic development.
- ✓ Agriculture is a seasonal industry.
- ✓ Loss of cottage industries.
- ✓ Low rates of savings and investment.
- ✓ Poor economic planning.
- ✓ Streetlessness Illiteracy.
- ✓ Mismatch of skills.
- ✓ Land fragmentation.
- ✓ Agriculture without technological development.
- ✓ Infrastructural deficiencies.
- ✓ Poor quality education.

7. சுற்றுச்சூழலில் மக்கள் தொகை வெடிப்பின் தாக்கத்தை ஆராய்க?

Examine the impact of population explosion on Environment?

- ✓ Utilization of physical resources due to population growth,
- ✓ Overuse and misuse increased manifold.
- ✓ More population means more agricultural production required. Pressure on lands increases.
- ✓ Human encroachment on forests, wetlands, ponds and green areas.
- ✓ Use of more water, more fertilizers and more pesticides.
- ✓ Use of fertilizers and pesticides makes the soil sterile.
- ✓ It requires more consumption of fossil fuels and more pollution of air, land and water.
- ✓ Various types of pollution cause many problems in the physical environment which affect the biological environment more seriously.

8. பெண்களின் சொத்துரிமை பற்றிய குறிப்பு தருக.

Give an account on women property rights.

1. Various social reformers have said that women should be given equal share in family property.
2. As an important aspect of it, in 1929, Thanthai Periyar at the Self-Respect Conference held at

Chengalpattu brought the resolution that women should be given equal share in the family property along with men.

3. Subsequently, the Government of Tamil Nadu, for the first time in India, enacted the Property Rights Act in 1989 to legally recognize property rights.
4. Subsequently, in 2005, the central government passed a law to give equal share to women in father's property.

9. **Dr.முத்துலட்சுமி மகப்பேறு உதவி திட்டம் (MRMBS) விவரிக்க.**

Explain Dr. Muthulakshmi Maternity Benefit Scheme (MRMBS).

This scheme was introduced in Tamil Nadu on 13-4-1989.

Main objective of the project:

1. Providing postnatal financial assistance to poor expectant mothers during pregnancy.
2. Rs 18,000. This amount will be paid in 5 instalments.
3. A nutritional gift box worth Rs. 4000 is also provided.
4. Eligibility Expectant mothers must have completed 19 years of age to avail the scheme.
5. The above instalment amount is applicable for two deliveries only.

Project Disclosure:

1. This program can reduce the mortality rate of pregnant mothers.
2. The program can ensure sex ratio of girls.

10. **பெண்களுக்கு அதிகாரம் அளிப்பதில் சுய உதவி குழுக்களின் பங்கினை விவரிக்க.**

Explain the role of Self-Help Groups (SHG) in women Empowerment.

1. Self Help Groups are an organization consisting of about 10 to 20 women.
2. They can take loans from the public as required by paying a certain amount.
3. Role of SHGs in empowering women.
4. Gives economic independence to women.
5. Making women entrepreneurs.
6. Women Inclusive Development.
7. Provides social development.
8. Gives political development

11. **ஏதேனும் இரண்டிற்கு விடை அளிக்க. Attempt any two:**

(1) **நம்ம ஸ்கூல் பவுண்டேஷன். Namma School Foundation.**

Commencement: December 2022

The project was launched in Chennai by the Chief Minister of Tamil Nadu.

Main objective of the project:

1. Improving the infrastructure of schools.
2. To improve the quality of the school through the program by educators and non-governmental organizations.
3. Through former students who attended the school to the schools they attended. Scheme to provide financial assistance for infrastructure development.
4. Also it will improve school infrastructure through corporate social responsibility (CSR) funds.
5. Basic facilities such as toilet, laboratory, library etc. will be provided in the schools.
6. TVS Group Chairman Venu Srinivasan and famous chess player Viswanathan Anand have been appointed as ambassadors for the programme.

(2) **நிபுன் பாரத். NIPUN BHARAT**

Commencement: July 2021

Main objective of the project:

1. To improve the basic knowledge of reading, writing and numeracy of school going children.
2. By this means complete basic education before the child completes the third standard.
3. Completion of the scheme by 2027.
4. The scheme is part of the National Education Policy.
5. The scheme will be implemented in schools at national, state, district, regional and local levels.
6. The scheme will serve as a model for taking school education i.e. basic education to the next level.
7. The scheme will ensure the goal of education for all.

(3) **சாக்சாம் அங்கன்வாடி மற்றும் போஷன் 2.0 (ஒருங்கிணைந்த உண்பச்சத்து ஆதரவு திட்டம்). Saksham Anganwadi and Poshan 2.0 (Integrated Nutrition Support Programme)**

1. Poshan Abhiyan 2.0 Integrated Nutrition Support Program, Anganwadi Program Start 2021.
2. The scheme is implemented by the Ministry of Women and Child Welfare, Government of India.
3. The main objective of the program is to create children free of malnutrition through this program.
4. According to the plan height reduction will be reduced by two percent per annum.
5. The proportion of undernourished children will be reduced by two per cent per annum.
6. Children with low birth weight will be reduced by two percent per year.
7. This program is useful for children, pregnant mothers, teenagers, and lactating mothers.
8. The main objective of the program is to create a Malnourished Free India by the end of 2022.
9. The scheme is a hybrid of Integrated Child Management Scheme, Prime Minister Madhuru Vandana Yojana, and National Health Mission.

12. **“இல்லம் தேடி கல்வி திட்டம்” – விவாதிக்கவும்.**

“Illam Thedi Kalvi” Scheme – Discuss.

1. Home Search Education Program is launched to revolutionize basic education and improve the lives of future generations.
2. Commencement June 2021: The scheme has been launched by the Chief Minister of Tamil Nadu.
3. OBJECTIVE OF THE SCHEME Due to the spread of the Corona virus, continuous education has been affected due to the closure of schools.
4. Hence there is a learning gap for the students from Class I to VIII.
5. The scheme is implemented to ensure basic education to bridge this gap.
6. The scheme will be operationalized in the evening work during school hours with volunteers.
7. By this the handicaps related to language and basic numeracy will be reduced.
8. This will ensure 100% basic education.
9. The scheme is being implemented through 100 percent financial contribution from the Government of Tamil Nadu.

13. **நிர்ப்பயா நிதி பற்றி சிறு குறிப்பு எழுதுக.**

Write a short note on Nirbhaya Fund.

1. **Start:** 2013
2. The government created a fund named Nirbhaya Fund to promote the safety of women.
3. About one thousand crore rupees have been earmarked for this.
4. It is administered by the Union Ministry of Finance and the Ministry of Women and Child Development.
5. This fund is used for various measures taken for the protection of women.
6. Mainly the scheme called **One Stop Center** is implemented under this fund.
7. Under this various schemes like development of necessary infrastructure for safety of women, development of technology oriented schemes, use of CCTV cameras, emergency number, SOS etc. are

being implemented.

14. ஆணவக் கொலை என்றால் என்ன? அதற்கான காரணங்களை ஆராய்க.

What is Honour Killing? Analyse its causes.

1. Manslaughter is also called honor killing.
2. This manslaughter is mostly committed in cases of non-consensual marriage, love etc. mainly by family or relatives.
3. Premeditated honor killing.

Reasons for this:

1. Patriarchal society
2. In the name of cultural policing
3. Ideology
4. Without awareness
5. For political reasons
6. Various laws have been enacted in India to prevent this.
7. Section 32 of the Indian Penal Code prohibits illegal panchayats etc.
8. Special Marriage Act 1954.
9. Protection of Human Rights Act 2006.
10. Domestic Violence (Protection) Act 2005.

15. 'பிங்க் பேட்ரோல்' பற்றி விளக்குக.

Define 'Pink patrol'.

1. 'Pink Petrol' scheme is an important scheme to ensure safety of women and children in Tamil Nadu.
2. Accordingly a special unit will be created in the State Police Department.
3. The program is designed to reduce crime against women and children.
4. A special investigation team will be created in the police.
5. All women police stations will be provided with patrol vehicles.
6. Mainly this project will be implemented in big cities like Chennai.
7. For this scheme free phone number 1901 and 1908 have been introduced.

16. பாலின சமத்துவ குறியீடு என்றால் என்ன? அவற்றிற்கான அளவீடுகளை வரிசைப்படுத்துக.

What is Gender gap index? List out its parameters.

1. This index is published by summarizing the difference and examining the factors associated with inequality.
2. The Index is published by the World Economic Forum (WEF).
3. India ranks 135 out of 146 countries by 2022.

Parameters:

1. Acquisition of economic participation,
2. Opportunity,
3. Education level,
4. Health,
5. Political empowerment.

17. டிஜிட்டல் சக்தி 4.0 - விவாதிக்க.

Digital Sakthi 4.0 – Discuss.

1. National Commission for Women has launched a program called Digital Shakti.
2. The project has been launched in association with Cyber Peace Foundation and Meta.
3. Its main objective is to create awareness among women across the country about digital education and its activities.
4. Report the problems they face digitally as complaints.

5. Dealing efficiently with the problems they encounter.
6. About three lakh girls across the country have been trained in cyber security under this scheme.

18. இ-சேவை மையங்கள் வழங்கும் பல்வேறு சேவைகளை வரிசைப்படுத்துக.

List out the various services provided by e-sevai centres.

1. Government of Tamil Nadu under E-Governance Scheme It has been launched to bring the administration and services of the State Government under e-Governance.
2. Providing various services to the beneficiaries of various public welfare schemes of the government.
3. It is run by Tamil Nadu Government Cable TV Company
 1. Revenue,
 2. Social Security Scheme,
 3. Land,
 4. Social welfare,
 5. Civil goods,
 6. Police,
 7. Transportation,
 8. Registration Department,
 9. Higher Education,
 10. Government is providing employment and various basic services through it.

19. தீவிரவாதத்திற்கான காரணங்கள் யாவை?

What are the causes of Terrorism?

1. Socioeconomic reasons
2. Unemployment
3. Poverty
4. Regardless of location
5. Wrong policies of the government
6. Less chance
7. Deprivation of Fundamental Rights
8. Violation of fundamental freedoms
9. Lack of education
10. Political causes Migrants infiltrating mainly North Eastern states of Assam and Tripura.
11. Regional causes take place in places like Punjab, Jammu and Kashmir.

20. 'ரெட் காரிடர்' பற்றி குறிப்பு தருக.

Give an account on 'Red Corridor'.

1. The Red Corridor area has been defined by the central government to declare the districts affected by left-wing extremism.
2. It is spread over 106 districts in 10 states namely Bihar, Jharkhand, Andhra Pradesh, Maharashtra, Odisha, Telangana, West Bengal, Madhya Pradesh, Uttar Pradesh and Chhattisgarh.
3. National policy and action plan developed by MoHA to reduce concentration of Naxal affected districts introduced.
4. All expenses incurred by the affected areas are covered under the Defense Related Expenditure (SRE) scheme.
5. It provides funds for development related projects like infrastructure, transport, communication, bridges and schools.

21. தேசிய புலனாய்வு முகமையின் (NIA) பங்கினை விளக்குக.

Elucidate the role of National Investigation Agency (NIA).

1. Inception of National Intelligence Agency 2008 Mumbai terror attack 26/11 It was launched as a key agency in counter-terrorism operations after the incident.
2. It is a legitimate organization for counter-terrorism operations.
3. Its main task is to investigate the matter and ensure the sovereignty, security and integrity of the country.
4. The body can take action under various laws. For example: Action can be taken under Unlawful Activities Prevention Act, Narcotic Drugs Act, Explosives Act, Nuclear Weapons Act, etc.
5. Special Courts constituted under this Act have full jurisdiction to prosecute and try persons who may be in any State of India.

22. தேசத்தின் வளர்ச்சியில் வன்முறையின் தாக்கம் பற்றி விவாதிக்க.

Discuss the Impact of violence on the growth of the nation.

1. The total economic impact is divided into three categories: direct costs, indirect costs and the multiplier effect of violence.
2. The direct costs associated with violence include the immediate effects on victims, perpetrators, and public institutions, including health, justice, and public safety.
3. Indirect cost of violence refers to long-term costs such as lost productivity, psychological effects and the impact of violence on safety and security in society.
4. A widening "prosperity gap" between less and more peaceful countries.
5. As social tensions rise in a country, it loses its appeal to global investors.
6. It is concerned that rising political and social tensions will delay economic recovery and its growth.

23. கூடலிறுத ஸெயல்பாடுகள் தடுப்புச் சட்டம், 2019 – விளக்குக.

Unlawful Activities (Prevention) Act, 2019 – Explain.

1. Prevention of Unlawful Activities Act 2019.
2. Individuals may also be declared terrorists as per the amendment made in this Act.
3. It applies to persons involved in terrorist related activities and those who plan in connection therewith.
4. By this the activities of the terrorist groups can be stopped completely and the assets related to the terrorism cases which can be investigated by the Director General of National Intelligence Mohammad will be confiscated.
5. Inspector-level officers in the National Intelligence Agency can now investigate terrorism-related cases.
6. It has been amended from earlier that only Sub-Inspectors could try cases.
7. The International Convention for the Suppression of Terrorism Using Nuclear Weapons is also included in the Second Schedule to this Act.
8. Background of the Act The Prevention of Terrorism Act was brought in 1967.
9. This is the primary law relating to the terrorism continuum.
10. According to the report of National Crime Records Bureau, the number of projects related to terrorist activities is increasing every year and the amendment of this Act becomes important.

24. தமிழ்நாட்டில் 'நரிக்குறவர்களுக்கு' க்கு ST அந்தஸ்து வழங்கியது பற்றி கருத்துரைக.

ST status for 'Narikuravas' of Tamil Nadu – Comment.

1. The process of inclusion of tribals in the ST list begins with the recommendation of the respective state governments, which are then forwarded to the Ministry of Tribal Affairs, which reviews them and forwards them to the Registrar General of India for approval.
2. The list follows the approval of the National Commission for Tribal Affairs before being sent to the Cabinet for final decision.

Narikoravan and Kurivikaran (Tamil Nadu):

1. Nomadic tribes like Narikuravas and Kuruvikaras (fox catchers and bird eaters) take pride in their traditional occupations of hunting and gathering.
 2. Access to benefits for STs under existing schemes of Govt.
 3. Some of the major benefits include post-matric scholarships, foreign scholarships and national fellowships, tuition, concessional loans from the National Scheduled Tribes Fund and Development Corporation and hostels for students.
 4. In addition, they will be entitled to the benefits of reservation in services and admission to educational institutions as per government policy.
25. மனித உரிமைகளின் உலகளாவிய பிரகடனம் (UDHR) மற்றும் அதன் கொள்கைகளை விளக்குக.

Explain Universal Declaration of Human Rights (UDHR), and its principles.

1. The UDHR was adopted by the newly established United Nations on 10 December 1948,
2. Rights and freedoms set out in the UDHR include:
 1. Right to be free from torture
 2. Right to freedom of expression
 3. Right to education
 4. Right to seek asylum.
 5. Civil and political rights, such as the rights to life, liberty and privacy.
 6. Economic, social and cultural rights, such as the rights to social security, health and adequate housing.

26. அரசுப் பேருந்துகளில் பெண்களுக்கு இலவசப் பயணம் எவ்வாறு பெண்களுக்கு அதிகாரமளிக்கிறது?

How Free Travel for Women in Government Buses leads to women empowerment?

1. The scheme has particularly helped women user Scheme – 2022
2. Contributing to higher disposable income
3. Enabling higher work participation
4. More savings
5. Reducing dependence on family members for their mobility
6. Fostering new opportunities for social networks and learning
7. The scheme also immensely helps street vendors especially in cities as they travel to buy vegetables and fruits from wholesale markets and sell in their respective areas.

27. பெண்களுக்கான மாநில வள மையம் (SRCW) பற்றி எழுதுக.

Write about the State Resource Centre for Women (SRCW)

1. Technical support in the effective implementation of women related schemes/ programmes.
2. Research and studies.
3. Training and capacity building and awareness generation.

Objectives:

1. Implement gender related programmes ,policies, laws and schemes meant for women
2. To support initiatives at the State level for Women's Empowerment
3. To Undertake research, Maintain gender related data
4. To undertake capacity building programme on women empowerment issues
5. To Prepare State Action Plans with focus on women issues
6. To provide Technical support to women centric schemes (Beti Bachao Beti Padhoa, One Stop Centres , Women Helpline & Gender Sensitization)

28. தமிழ்நாடு திருநங்கைகள் நல வாரியம் – விவாதிக்க.

Tamil Nadu Transgender Welfare Board – Discuss.

1. Tamilnadu transgender welfare board :15.04.2008
2. To empower the Transgenders through various services as
3. Identity Cards Ration Cards, House Pattas, residential Homes, Free Sewing Machines ,Higher Education assistance, Self Help Groups ,free bus travel free skill trainings,
4. Grant upto Rs.50,000/- for income generating and economic activities
5. Exclusive Mobile App, “Thirunangai” has been developed to enable transgender to register their details and easily avail Identity Card.

29. ஆதி திராவிடர் மற்றும் பழங்குடியினர் நலன் மேம்பாட்டிற்காக தமிழக அரசின் திட்டங்களை பட்டியலிடுக.

List out the Schemes of Tamil Nadu Government for the development of Adi Dravidar and Tribal Welfare.

1. Tribal welfare schools
2. Scholarship programmes
3. Women education incentives
4. Hostels for schools and colleges
5. Adidraavidar sub scheme
6. Integrated tribal development programme
7. Forest rights minor forest produce scheme
8. TAHDCO – To provide financial assistance for housing and Entrepreneurship

30. ஜனனி சுரக்ஷா யோஜனா பற்றி குறிப்பு தருக.

Give an account on Janani Suraksha Yojana.

1. Safe motherhood intervention under the National Health Mission (NHM).
2. Launched- 2005.
3. Implemented in all states and UTs with special focus on low performing states.

Objectives:

1. Reducing maternal
2. Neonatal mortality
3. To promote institutional delivery among pregnant women
4. Cash assistance to pregnant women in a government or accredited private health facility.
5. The scheme also provides performance-based incentives to women health volunteers known as ASHA (Accredited Social Health Activist) for promoting institutional delivery among pregnant women.

31. அரசுப் பள்ளி மாணவர்களுக்கான வானவில் மன்றம் முனைப்பு பற்றி எழுதுக.

Write about Vanavil Mandram Initiative for Govt School students.

1. Vanavil Mandram Programme 2023:- Vanavil Mandram also known as Rainbow Forum
2. Aim to foster Scientific Interest among students.
3. This initiative is for the students from class 6 to 8 studying in the Government schools
4. To learn Science, Technology, Engineering and Mathematics (STEM).
5. 100 mobile laboratories to promote scientific temperament
6. The programme is launched for students of classes 6-8 at an amount of Rs. 25 crores.

32. பொருளாதார வளர்ச்சியில் கல்வியின் பங்கு யாது?

What are the roles played by education in economic development?

1. Human Capital Formation

2. Human capital is directly related to human development
3. Productivity -increase import and export
4. Reduces Poverty- per capita income and resource accessibility
5. Women Empowerment- employment participation
6. Social Development- education
7. Health Awareness
8. Increase National income – Gross domestic product
9. Skill development

33. மெக்காலே அறிக்கை பற்றி குறிப்பு தருக.

Give a note on Macaulay's Minute.

1. 2 February 1835,
2. British historian and politician Thomas Babington Macaulay presented his 'Minute on Indian Education'
3. Spending Only on Western Education: government to spend money only on western education, not oriental education.
4. Closure of Colleges: He advocated for the closure of all colleges that taught only eastern philosophy and subjects.
5. Downward Filtration Theory: government to educate only a few Indians, who would then educate the rest of the population. This is referred to as the downward filtration' policy.
6. Indian by Blood & British by Taste: to create a pool of Indians capable of serving British interests and remaining loyal to them.
7. This group would be "Indian by blood and color, but English by tastes, opinions, morals, and intellect."

34. ஏதேனும் இரண்டிற்கு விடை அளிக்க: Attempt any two:

(i) தேசிய நிறுவன தரவரிசை கட்டமைப்பு (NIRF).

National Institutional Ranking Framework (NIRF).

1. Ministry of Education (Erstwhile Ministry of Human Resource Development)
2. September 2015.
3. To rank Higher Education Institutions (HEIs) in the country.
4. Assessment on Five Parameters:
5. Teaching, Learning and Resources (TLR)
6. Research and Professional Practice
7. Graduation Outcomes (GO)
8. Outreach and Inclusivity (OI)
9. Peer Perception.
10. Top rankings (over all) - IIT-Madras, IISc-Bangalore, and IIT-Bombay the country's top three higher education institutions.

(ii) தேசிய மதிப்பீடு மற்றும் அங்கீகார கவுன்சில் (NAAC).

National Assessment and Accreditation Council (NAAC).

1. It's an autonomous body under the University Grants Commission (UGC),
2. Gradings as part of accreditation.

3. The ratings of institutions range from A++ to C. If an institution is graded D, it means it is not accredited.
4. To encourage self-evaluation, accountability, autonomy and innovations in higher education.

(iii) இன்ஸ்டிடியூட்டின் ஆஃப் எமினன்ஸ் (IoE)

Institute of Eminence (IoE)

1. To undertake quality-related research studies, consultancy and training programmes.
2. To empower the Higher Educational Institutions and to help them become world-class teaching and research institutions.

Objectives:

1. Excellence and Innovation
2. Specialization
3. Global Rating
4. Quality teaching and Research
5. Incentives of the scheme
6. Institutes with IOE tag will be given greater autonomy and freedom to decide fees, course durations and governance structures.
7. The public institutions under IOE tag will receive a government grant of ₹1,000 crore, while the private institutions will not get any funding under the scheme
8. Some institutions IIT Madras, Banaras Hindu University, IIT Kharagpur, University of Delhi.

35. 'தமிழ்நாடு கடன் உத்தரவாதத் திட்டம்' - விளக்குக.

'Tamilnadu Credit Guarantee Scheme' – Explain.

1. Year 2022
2. This scheme is designed with the aim of providing loans financing to micro, small, and medium-sized enterprises (MSMEs)
3. To encourage the growth of the micro, small, and medium industrial sectors by making 90% guaranteed loans available to small-size firms for amounts up to 40 lakh.
4. Additionally, qualified borrowers would obtain an 80% guarantee on loans of more than Rs 40 lakh but less than Rs 2 crore.
5. Goal of expanding the MSME sector via the provision of financial assistance.

36. இந்திய திறன் கல்வி நிறுவனங்கள் (IISs) பற்றி ஒரு சிறு குறிப்பு எழுதுக.

Write a short note on Indian Institutes of Skills (IISs).

IIS Objective:

1. To provide skill training in highly-specialised areas to students who want to pursue technical education after completing Class X and XII and also to make them employable and industry ready for New India and global market.
2. IIS seeks to ensure that 5,000 trainees
3. 70% placement opportunities.
4. As per MSDE, the IIS will be a tertiary care institute in skills ecosystem
5. Skill training in high demand areas such as deep technology, aerospace, among others.
6. IIS will be on the lines of the IITs and IIMs.
7. The launch of IIS is a step towards making India the Skill Capital of the World.

37. தேசிய திறன் மேம்பாட்டுக் கழகம் (NSDC) மற்றும் பயிற்சி இயக்குநரகம் (DGT) ஆகியவற்றின் திட்டங்கள் மற்றும் பல்வேறு முனைப்புகளை பட்டியலிடுக.

List out the various Schemes & Initiatives of National Skill Development Corporation (NSDC) and Directorate General of Training (DGT).

1. The Directorate General of Training (DGT) in Ministry of Skill Development and Entrepreneurship is the apex organisation for development and coordination at National level for the programmes relating to vocational training
2. NSDC was founded in 2009
3. By Ministry of Finance to address need for providing skilled manpower across various industry sectors.
4. Schemes under
5. PM Kaushal Kendra Technical Intern Training Program (TITP)
6. Skill Impact Bond
7. Specified Skilled Worker
8. SWADES: Government of India is conducting skill mapping of overseas returning citizens through Vande Bharat Mission.
9. Project AMBER: PROJECT AMBER (Accelerated Mission for Better Employment and Retention).

38. 'கங்கைகொண்ட சோழபுரம் – மாளிகைமேடு' அகழ்வாராய்ச்சியின் முக்கியத்துவம் பற்றி எழுதுக.

Write about the significance of 'Gangai Konda Cholapuram – Maligaimedu' excavation.

The State Department of Archaeology has made excavation at Maligaimedu near Gangaikondacholapura the capital of King Rajendra Chola I.

Findings:

1. Thirteen coarse brick walls
2. A copper coin, some potsherds and iron pieces
3. A piece of Chinese celadon ware, belonging to 10-11th century
4. Excavations conducted earlier at Maligaimedu had revealed the remains of a royal palace
5. Gangaikondacholapuram was established by King Agenda Chola I (1012-1044 CE) after his victorious expedition up to the Gangetic plains.
6. It became the capital of the Chola dynasty in c. 1025 during the reign of Rajendra Chola I, and served as the Chola capital for around 250 years.
7. The great Brihadeeswarar Temple at this place is next only to the Brihadisvara temple at Thanjavur in its monumental nature and surpasses it in sculptural quality.
8. It has been recognised as a World Heritage site by UNESCO.

39. புதிய தொழில்முனைவோர் மற்றும் நிறுவன மேம்பாட்டுத் திட்டம் பற்றி குறிப்பெழுதுக.

Write a note on New Entrepreneur cum Enterprise Development Scheme.

1. NEEDS Scheme is promoted by the Directorate of Industries and Commerce, Government of Tamil Nadu
2. For providing opportunities for young/new educated entrepreneur with subsidy and support for starting a new venture.
3. Educated youth with any degree, diploma, ITI/vocational training from recognized institutions.
4. TIIC, the ideal destination for business loans in Tami Nadu, also acts as the nodal agency for Government subsidies for customers availing loan for business.
5. Minimum project cost is Rs. 10 lakh.

6. Maximum project cost is Rs. 500 lakh.

40. பெண் தொழில்முனைவோர் எதிர்கொள்ளும் சவால்களை பட்டியலிடுக.

List out the Challenges faced by Women Entrepreneur.

1. Lack of Social and Institutional Support
2. Poor Funding Prospects
3. Lack of Access to Professional Networks
4. Pressure to Stick to Traditional Gender Roles
5. Lack of an Entrepreneurial Environment
6. Limited Mobility
7. Lack of Education
8. Balancing Responsibilities between Family & Business
9. Stiff Competition
10. Limited Industry Knowledge
11. Missing Role Models

41. இணையத்தின் பல்வேறு பயன்பாட்டினை விளக்குக.

Elucidate the various application of Internet.

1. Sending and receiving email
2. Searching and browsing information archives
3. Copying files between computers
4. Conducting financial transactions
5. Navigating (in your car, smart scooter, smart bike, or other)
6. Playing interactive games
7. Video and music streaming
8. Chat or voice communication (direct messaging, video conferencing)

42. பிளாக்செயின் தொழில்நுட்பத்தை விளக்கி அதன் வரம்புகளை பட்டியலிடுக.

Explain Block chain technology and list out its limitations.

1. Blockchain is a distributed database or ledger
2. Blockchain stores information electronically in digital format
3. Cryptocurrency systems, such as Bitcoin,
4. Security of a record of data
5. Scalability
6. Energy Consuming
7. Time-Consuming
8. Legal Formalities
9. Storage

43. 'வமனியா' முன்முனைவு விளக்குக.

Explain 'Womaniya' Initiative.

1. Womaniya on GeM
2. To develop women entrepreneurship on the margins of society to achieve gender-inclusive economic growth.
3. Women entrepreneurs and women self-help groups
4. To sell handicrafts and handloom,
5. Jute and coir products,
6. Home decor and office furnishings,
7. Directly to various government ministries, departments and institutions.

44. SAMARTH தொழில்முனைவோர் திட்ட இயக்ககம் குறித்து குறிப்பு தருக.

Give an account on SAMARTH Entrepreneurship Program Drive.

1. Launch – 2022
2. To provide Skill Development and Market Development Assistance to women and to train more than 7500 women candidates from rural and sub-urban areas
3. 20% Seats in free Skill Development Programs organized under skill development schemes of the Ministry will be allocated for Women.
4. 20% of MSME Business Delegations sent to domestic & international exhibitions
5. 20% Discount on annual processing fee on NSIC's Commercial Schemes Special Drive for registration

45. பிரதான் மந்திரி முத்ரா யோஜனா பற்றி குறிப்பெழுதுக.

Write a note on Pradhan Mantri Mudra Yojana.

Launched - 2015.

Scheme objective:

1. To refinance collateral-free loans given by the lenders to small borrowers.
2. Banks can draw refinance under the MUDRA Scheme
3. After becoming member-lending institutions of MUDRA.
4. Mudra Loans are available for non-agricultural activities upto Rs. 10 lakh and activities allied to agriculture such as Dairy, Poultry, Bee Keeping etc, are also covered.

Three types of loans:

1. Shishu (up to Rs.50,000).
2. Kishore (from Rs.50,001 to Rs.5 lakh).
3. Tarun (from Rs.500,001 to Rs.10,00,000).

46. புதுமை பெண் திட்டம் குறிப்பு வரைக.

Write a note on Puthumai Penn scheme.

Under the Moovalur Ramalinga Vratham Ammaiyyar Higher Education Assurance Scheme on behalf of Tamil Nadu Government Department of Social Welfare and Women's Rights

The scheme provides a scholarship of Rs 1000 per month to female students studying higher education in government schools from 6th to 12th standard.

Through this scheme, women are given higher education and gender equality is achieved.

1. Prevention of child marriage.
2. To financially assist female students who are unable to pursue higher education due to family situation and poverty.
3. To reduce the dropout rate of girls and to encourage girls to pursue their higher education according to their choice.
4. Encouraging female talent and participation in all fields through higher education.
5. Through this scheme it is possible to create an intellectually egalitarian society by increasing employment opportunities for women and ensuring economic security.

47. SVAMITVA சிறு குறிப்பு தருக.

Write a short on SVAMITVA Scheme.

1. To bring financial stability to citizens in rural India by enabling them to use their property as a financial asset for availing loans and other financial benefits.
2. Creation of accurate land records for rural planning.
3. Fixation of property tax, which will either accrue directly to the GPs in the devolved states or be added to the state exchequer.
4. Creation of survey infrastructure and GIS maps that can be used by any department for their

application.

5. Assist in preparation of better quality Gram Panchayat Development Plan (GPDP) using GIS maps.
6. To reduce disputes and legal cases related to property.
7. About 6.62 lakh villages in the country will eventually be included in this scheme. The entire work will be spread over five years.

48. இந்தியாவில் குழந்தை தொழிலாளர் ஒழிப்பில் அரசு சாரா அமைப்புகளின் பங்களிப்பு குறித்து விளக்குக.

Explain the contribution of NGOs in eradicating child labour in India.

1. One in ten children worldwide are child labourers. The number of children in child labor has fallen by 94 million since 2000.
2. Attrition rate has come down by two-thirds in recent years. There are about 10.13 million child laborers between the ages of 5 and 14 years in India.

Major organizations working to eradicate child labor in India are:

1. Kailash Satyarthi Children's Trust
2. Hand in Hand India
3. Global march against child labour
4. UNICEF
5. Smile Foundation
6. Don Bosco Balfracula
7. Save the children

49. வறுமையை பெண்ணியமயமாக்கல் என்ற பதத்தினை விளக்குக.

Explain the term Feminization of Poverty.

1. The concept of 'Feminization of poverty' was first mentioned by Diana Pearce in the late 1970s.
2. 'Feminization of poverty' is a term that refers to the gaps between women and men in the cycle of poverty. This phenomenon is generally reflected in other fields as well.
3. Women are often in an unequal situation. Suffer from misconceptions and discrimination. A majority of women in India are under-educated and underrepresented in the skilled and unskilled labor sectors.

Reason for Feminization of poverty:

1. Low education
2. Not getting married in due time
3. Poor development policy
4. Lack of decision making power among women
5. Lack of information
6. Sanitation and Insecurity
7. Responsibilities associated with motherhood
8. Professional inequality
9. Morality and Inequality
10. High prevalence of female headed households
11. Inequality at home

50. இந்தியாவில் திறந்தவெளிமலம் கழித்தல் இல்லாத நிலையை அடைவதற்கு தடையாக உள்ள முக்கிய சவால்கள் யாவை?

What are the major challenges in achieving open defecation free status in India?

1. Conservative mindset
2. Lack of awareness
3. Corruption is rampant
4. Poverty and illiteracy

5. Practices like untouchability and ritualistic beliefs
6. Presence of slums and unplanned settlements in urban areas

51. ஊரக சுகாதார உத்திகள் 2019-2029 – விவரிக்க.

Rural Sanitation Strategy 2019-2029 - Explain.

1. Recently, the Department of Drinking Water and Sanitation (DDWS) under the Ministry of Jal Shakti has launched a 10-year Rural Sanitation Strategy from 2019 to 2029.
2. The strategy was prepared by DDWS in consultation with state governments and other stakeholders.
3. It lays down a framework to guide local governments, policy makers, implementers and other relevant stakeholders in planning for No Open Defecation (ODF) plus status.
4. Sustain the health related behavior change achieved under Swachh Bharat Mission Gram (SBM-G).
5. The strategy aims to ensure that focus is placed on increasing access to solid and liquid waste management in rural areas of the country.
6. Public financing plays an important role in the ODF journey, but maintaining toilets and infrastructure requires innovative models of health financing.
7. For the waste management component, funding should be mobilized from alternative funding sources including the Centre, States, Panchayat Raj Institutions (PRIs) and private funds.

52. குழந்தை தொழிலாளரின் மீதான கோவிட் -19 தாக்கம் பற்றி ஆராய்க.

Examine the impact of Covid-19 on child labour.

1. The unprecedented economic impact of the Covid-19 pandemic is pushing children into exploitation and dangerous child labour.
2. Many children feel that their families have no choice but to work to survive, but the increase in child labor is not an inevitable consequence of the epidemic.
3. Governments and donors should prioritize cash grants to help families maintain an adequate standard of living without resorting to child labour.
4. Another significant driver of child labor is illness, disability or death of a parent. As the global death toll due to Covid-19 surpasses 3.3 million, hundreds of thousands of children around the world have lost their parents and are forced to become their families' primary breadwinners.

(12 MARKS)

1. கிராமப்புற வேலையின்மைக்கான காரணங்களைப் பற்றி விவாதிக்கவும் மற்றும் அதற்கான தீர்வுகளை வரையறுக்கவும்.

Discuss the causes for rural unemployment and sketch out its remedies.

The causes of rural unemployment in India are discussed below:

- ✓ **Lack of skill development and employment generation:** Lack of initiatives to provide necessary training and subsequent job creation.
- ✓ **Seasonal Nature of Agriculture:** Agricultural activities are seasonal in nature and depend on nature and rainfall.
- ✓ **Lack of ancillary industries:** Rural people are unable to start ancillary industries due to lack of funds for investment and lack of proper marketing arrangements.
- ✓ It restricts employment and rural household income.
- ✓ **Mechanization of Agriculture:** Mechanization of agricultural activities like ploughing, irrigation, harvesting, threshing reduces employment opportunities for agricultural workers.
- ✓ **Capital-intensive technology:** Growing private industry is largely located in urban areas.
- ✓ **Change in education system:** Degrees should be awarded based on skills. Unemployed youth should get adequate facilities to develop their skills.

Solutions to Rural Unemployment:

- ✓ **Ancillary Industries:** Rural people should be encouraged to take up ancillary industries to reduce seasonal unemployment.
- ✓ **Rural Employment Scheme:** Rural employment scheme like construction and maintenance of roads, digging of drains, canals etc. should be planned to provide employment to the unemployed.
- ✓ **Irrigation facilities:** As rainfall is uncertain, farmers need to expand irrigation facilities to accommodate multiple crops.
- ✓ **Rural industrialization:** New industries should be set up in rural areas to provide employment. It will open up new employment sectors and change the attitude of rural people towards work.
- ✓ **Technical Education:** Employment oriented courses should be introduced in schools and colleges to enable literate youth to start their own units.

2. வேலை வாய்ப்புக்கான கெயின்சியன் கோட்பாட்டை விளக்குக.**Explain Keynesian Theory of employment.**

- ✓ According to this theory, because there is not enough demand for goods and services, the total real resource that can be used up, unemployment arises.
- ✓ According to Keynes, there are three main causes of spreading unemployment:
 - ✓ Absence of useful need
 - ✓ Disadvantage of consumption expenditure
 - ✓ Lack of investment
- ✓ The new classical school believes that unemployment is the result of overproduction.
- ✓ Overproduction lowers the price of goods, which increases unemployment.
- ✓ Some economists have attributed unemployment to imbalance between demand and supply.
- ✓ When the effective demand for the products of the factories decreases, if the factory closes where the price falls, we stop and men are reduced to unemployment. Their own.
- ✓ Low demand was the result of low growth rate due to poor trade and commerce, shift of investment from industrial to non-industrial sectors.
- ✓ Lionel Eddy Software argued that unemployment is caused by disruptions in economic structure.
- ✓ Elliott and Merrill unemployment is the primary result of a downturn in the business cycle following a period of industrial prosperity.
- ✓ Advances in technical skills and highly specialized division of labor made it impossible to secure jobs for able-bodied and skilled men.
- ✓ Bartlett stated that virtual monopolies such as iron and steel industries were a major factor in producing depression.
- ✓ This theory is considered Keynesian theory of employment.

3. இந்தியாவில் புலம்பெயர்ந்த தொழிலாளர்கள் எதிர்கொள்ளும் பிரச்சனைகளை விளக்குக.**Explain the problems faced by the migrant Labourers in India.**

- ✓ A “migrant worker” is defined in International Labor Organization (ILO) instruments as a person who migrates from one country to another (or migrates from one country to another).
- ✓ Incidents of spraying disinfectant on migrant workers in Uttar Pradesh and elsewhere.
- ✓ No proper data base.
- ✓ No proper telecommunication No integrated system.
- ✓ Uniform pay structures and no bad wages.
- ✓ No proper regulatory policy for migrant workers.
- ✓ Lack of proper implementation of Inter-State Migrant Workers (Regulation of Conditions of Employment and Service) Act, 1979.
- ✓ Lack of proper coordination between center and states.

- ✓ Mostly all unskilled workers.
- ✓ Exploitation by capitalists.
- ✓ Poor wages and no proper accommodation.
- ✓ Poor living conditions.
- ✓ Inaccessibility to government provided services due to lack of identity proof and other documents.
- ✓ Absence of government intervention.
- ✓ No permanent employment.
- ✓ Feminism of Poverty.
- ✓ No skill updates and upgrade.
- ✓ Economic insecurity faced by migrant workers and its impact on their family members in their home states.

4. “நான் முதல்வன் திட்டம்” பற்றி விவரி. இந்தத் திட்டம் திறன் மேம்பாட்டிற்கு எவ்வாறு உதவுகிறது?

Explain “Naan Muthalvan Scheme”. How this scheme contributes to skill development?

1. A new program called 'Nan Muthalvan' is a skill development and guidance program for school, college students and youth of Tamil Nadu to make them successful not only in studies but also in life.
 2. The main objective of the 'Naan Mutuvan' program is to develop 10 lakh youth in education, knowledge, thinking, energy and skills to the country every year.
 3. The highlight of this scheme is to identify and promote the individual talents of the students of Government and Government Aided Schools, Colleges and Universities.
 4. Students will be guided on what to study, where to study and how to study
 5. Training in writing and speaking fluently in English and preparation for interview will be provided along with special training to acquire special skills in Tamil.
 6. Training courses like Coding, Robotics will be conducted for school students according to the current technological development.
 7. Special summer classes will be conducted with top achievers in each department.
 8. Psychiatrists, health doctors advise on solid food intake and training on exercise, style, dress, manners, socializing, etc.
 9. Awareness about Tamil culture and tradition will be created among the students.
 10. All the trainings for this purpose will be provided as per requirement like live training, online training, training in their college, district wise training with the best trainers.
 11. Guidance counselling centre will be established in every school. A separate curriculum and curriculum will be developed for this purpose and a series of classes will be conducted for students studying from 9th to 12th standard.
 12. Mentoring system will be introduced for students studying in government schools with former students.
 13. In this scheme, provision will be made to teach foreign languages to college students according to their choice to ensure employment abroad.
 14. Government vocational training institutes will be upgraded to Industry 4.0 standard
 15. As per the merit and interest of the students, admission in the top institutes/reputed universities/skill development institutes of the country will also be ensured through these series of trainings.
 16. Tamil Nadu Government Departments and Institutions Jobs, Central Government Jobs, Other State Jobs will be published as notifications under this scheme and trainings will be coordinated.
5. சிவில் சர்வீஸ் திறன் மேம்பாட்டிற்கான தேசிய திட்டம் (கர்ம் யோகி இயக்கம்) - விவாதிக்க.

National Programme for civil service capacity building (Mission Karmayogi) – Discuss.

1. A National Program for Capacity Building of Civil Service Officers.
2. The central government has decided to implement a scheme called Mission Karumayogi to improve the capacity of central government employees.
3. The scheme is considered as a major reform of human resource development.
4. Capacity building of government employees is seen as the main objective of this scheme.

Key Features of the Scheme:

1. Prime Minister's General Human Resource Development Committee Skill Development Authority.
 2. Digital assets and
 3. Special organization to manage technical platform for online training Coordinating Committee headed by Cabinet Secretary.
 4. Making India's civil servants creative for the future.
 5. Making civil servants efficient and professional.
 6. Capacity Building of Government Servants To get capacity building of Government Institutions.
 7. The scheme is applicable to everyone from Divisional Officers to Government Department Secretaries.
 8. Through this scheme, the rights of the Government of India are provided to the people.
 9. Government's public welfare programs are a major milestone in reaching the people directly.
6. பெண்களுக்கு அதிகாரம் அளிப்பதற்கான மத்திய அரசின் பல்வேறு நல திட்டங்களை விவரிக்க.

Enumerate the various welfare Union government schemes associated with empowerment of women.

1. Peti Pacho Peti Pato Let's protect the girl child let's educate the girl child.
2. Improve the declining female child sex ratio.
3. This program was introduced to educate them.
4. Prime Minister Mathru Vandana Yojana is a scheme that provides financial assistance to pregnant women and mothers.
5. Rashtriya Mahila Gosh Microfinance Scheme to improve the livelihood of women.
6. Ujjwala Scheme A scheme to protect women from various evils like trafficking and exploitation and provide livelihood to them.
7. Women's Hostel Scheme A scheme to set up hostels for working women in urban areas.

One Stop Center:

1. Women can get help from different types of problems they face especially violence, medical, police, legal etc.
2. Pradhan Mantri Ujjwala Yojana is a free cooking gas scheme.
3. Mahatma Gandhi National Rural Employment Guarantee Scheme One third of the scheme should be compulsorily given to women.

Mahila E-Haat:

Pradhan Mantri Mahila Shakti Kendra Scheme is a joint initiative of Central Government to empower women in rural areas.

7. தமிழகத்தில் பெண்களின் கல்வியறிவின்மைக்கான காரணங்கள் மற்றும் தாக்கத்தை பகுப்பாய்வு செய்க.

Critically examine the causes and impact of women's illiteracy in Tamil Nadu.

The causes and impact of women's illiteracy in Tamil Nadu.

According to the 2011 census India's overall literacy rate is around 73%, of which the male literacy rate is 80% and the female literacy rate is 64%.

Important reasons:

1. Child marriage
2. Dowry cruelty
3. Infanticide
4. Economic inequality
5. Gender Discrimination
6. Caste-Religious Discrimination
7. Technical barriers
8. Poverty
9. Various reasons can be given like social control.
10. Due to lack of educational knowledge of women, there will be various impacts on the society.
11. Impediment in economic and social progress.
12. Abnormal living environment
13. Social Offences
14. Offence against unemployment.
15. Being neglected in society.
16. Political boycott.

17. The government has developed various educational programs to correct the problems.
 18. There are various schemes in operation which mainly focus on female education.
 19. Chief among them is the Right to Free and Compulsory Education Act-2009 which ensures education for children.
 20. Through such measures women can reduce the status of education as illiterate and ensure the creation of an equitable society.
8. “வறுமை ஒழிப்பிற்கு பெண்களுக்கு அதிகாரம் அளித்தலே முக்கிய படி” - திறனாய்வு செய்க.
- “Women empowerment is vital for poverty alleviation” – Critically Analyse.**
1. Women make up about half of the country's population and the potential of women's human resources is essential for the country's development.
 2. Sustainable and sustainable development is possible only if that human resource is properly utilized.
 3. Various reports suggest that the amount women can spend is mainly on food and health maintenance and on children.
 4. Important Challenges in Empowerment of Women Educational knowledge is seen to be highly disparate between men and women.
 5. Total literacy rate of India's population is about 75%.
 6. Out of them the educational literacy ratio of males is 82%.
 7. Female ratio is 65%.
 8. There are various barriers in the society regarding women's education.
 9. Health and safety Women face different health related problems than men.
 10. These hinder the advancement of women.
 11. EMPLOYMENT INEQUALITY Men are employed more than women in both government and private sector.
 12. IMPORTANT MEASURES Various measures have been taken by the government to improve the welfare of women in terms of community-based health.
 13. Various educational programs have been initiated by the government to improve the educational status of women.
 14. Legislation has been enacted to provide equal pay for both men and women depending on the economy.
 15. Regarding politics Women's participation in politics is seen as an important aspect in a democratic country.
 16. About 33 percent seats in local bodies have been reserved for women to ensure representation of women.
 17. This will ensure representation of women.
 18. Self Help Groups Small credit assistance is provided through these groups for economic upliftment of women and to make women entrepreneurs.
 19. The above measures will ensure that empowerment of women is the first step towards uplifting the status of women and eradicating poverty.
9. கோவிட்-19 பொது முடக்கம் பெண்களுக்கு எதிரான குடும்ப வன்முறைகளை அதிகப்படுத்தியது - கருத்துரைக.
- Covid-19 Lockdown leads to increased domestic violence against women – Comment.**
1. Domestic violence against women worldwide during the Covid-19 pandemic is 67% higher than in previous years.
 2. Globally, one in three women are victims of domestic violence.
 3. About 82 percent of the total number of victims is found to be victimized by husband or close family relative.
 4. Similarly in India according to the National Family Welfare Survey report, about 31 percent of women are exposed to various forms of domestic violence.
 5. They are mainly physically, mentally, sexually abused.
 6. It is said that this domestic violence has increased due to various reasons and public shutdown.
 7. The general shutdown has become a major factor in the escalation of violence.

8. About 40% of the violence is sexually developed.
 9. Around 300 complaints of domestic violence have been received by the National Commission for Women during the general round.
 10. Non-functioning of Counseling Centers as reasons for these.
 11. Police stations not functioning properly.
 12. Non-Governmental Organisations.
 13. Without alternative means of settlement.
 14. Similarly, various types of violence have been caused during this general shutdown and various domestic violence against women is emerging.
10. இந்தியாவில் பெண்கள் எதிர்கொள்ளும் பல்வேறு சமூக அநீதிகள் பற்றி எழுதுக.

Write about various social injustice faced by women in India.

1. Conspiracy
2. Dowry Abuse Prevention Act - 1960

Child Marriage:

1. Illiterate parents
2. Poverty
3. Dowry
4. Insecure society
5. Population growth
6. Defects in laws

Consequences of child marriages:

1. Increase in perinatal mortality
2. Increasing poverty

Laws Against:

1. Child Marriage Prohibition Act - 2006
2. Child Marriage Prevention Officers

Female infanticide:

Killing newborn girls

Reasons:

1. Poverty
2. Child marriage
3. Boy crush
4. Inexperience
5. Dowry

Effects:

1. Gender difference
2. Low sex ratio
3. Declining female literacy

Projects:

1. Cradle Child Scheme - 1992
2. Protection of Girl Child Scheme - 1992
3. Save the Girl Child Educate the Girl Child Program - 2015

Money Marriage:

1. A man marrying more than one woman at the same time.
2. Hindu Marriage Act 1955 allows a person to have only one wife.

Sexual Harassment:

1. Physical Harassment.
2. Inviting, coercing.
3. Insistence on watching sexually oriented books and movies.
4. Physical sexual coercion.

Legal Actions:

1. Sections 14, 15, 21, 19(1) (g)
2. The Sexual Harassment (Prevention, Prohibition, Redressal) Act – 2013

11. தமிழ்நாடு மாநில மகளிர் கொள்கை 2021 முக்கிய அம்சங்களை பட்டியலிடுக.

List out the key features of Tamil Nadu State Policy for Women 2021.

1. State Women Policy released in December 2021.
2. This policy will be implemented for the next five years.
3. As per this new policy special focus is given to school and college going girls.
4. Mainly different types of martial arts will be given trainings.
5. Also 50 additional days of Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) days will be allocated for women headed households to improve their livelihood.
6. Women's representation in recognized political parties will be increased to 33 percent.
7. Efforts will be made through the Kasturibai Gandhi Palika Vidyalaya scheme as part of the program to promote girls' education up to 19 years of age.
8. Through this basic education of girl child will be ensured.
9. Research involving more women will be given priority
10. Consequently, assistance will be provided to thousands of female students as excellent researchers.
11. All assistance will be provided for conducting excellent research mainly in the fields of Science, Technology, Engineering and Mathematics (STEM).

12. கல்வி உரிமைச் சட்டம், 2009 என்பது இந்தியாவில் தொடக்கக் கல்விக்கான ஒரு கருவியாகும்- சர்ந்து ஆராய்க.

Right to Education Act, 2009 is a tool for Elementary Education in India- Critically Analyse.

1. Right to Education (RTE) Act, 2009
2. The RTE Act aims to provide primary education to all children aged 6 to 14 years.
3. It enforces Education as a Fundamental Right (Article 21).
4. 25% reservation for SCs and STs Socially Educationally Backward Class Differently abled
5. Provisions for a non-admitted child to be admitted to an age appropriate class.
6. sharing of financial and other responsibilities between the Central and State Government
7. Norms and standards related to: Pupil Teacher Ratios (PTRs) Buildings and infrastructure School-working days Teacher-working hours.
8. “No Detention Policy” removed under RTE (Amendment) Act, 2019.

Main achievements in elementary education:

1. Increase enrolment in the upper primary level (Class 6-8).for example (Gross enrollment primary tamilnadu – 100 %)
2. Improved school infrastructure, especially in rural areas.
3. More than 3.3 million students secured admission under 25% quota norm under RTE.
4. It made education inclusive and accessible nationwide.
5. The Government has also launched an integrated scheme, for school education named as Samagra Shiksha Abhiyan, which subsumes the three schemes of school education:
6. Sarva Shiksha Abhiyan (SSA)
7. Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
8. Centrally Sponsored Scheme on Teacher Education (CSSTE)

13. கொத்தடிமை முறைக்கான பல்வேறு காரணங்களை விளக்கவும் மற்றும் தீர்வு நடவடிக்கைகளை விவாதிக்கவும்.

Illustrate various causes for bonded labours and Discuss remedial measures.

1. It is a practice in which employers give high-interest loans to workers who work at low wages to pay off the debt.
2. Bonded labour is found to exist in both rural and urban pockets in unorganized industries such as brick kilns, stone quarries, coal mining, agricultural labour, domestic servitude, circus, and sexual slavery.

Causes of Bonded Labour:

1. The lack of awareness among workers and employers.
2. Low conviction rates.
3. Social bias towards bonded labour.
4. Migratory nature of bonded labour.
5. Weaker implementation of Bonded Labour System (Abolition) Act 1976.
6. Punishment for forced labour (Section 374 of IPC– unlawful compulsory labour) is not appropriate.
7. Lack of proper coordination at the national and regional level, and among governments.

Measures Constitutional Provisions and legal provisions:

1. Article 21 deals with the Right to Life and Personal Liberty.
2. Article 23 of the Constitution prohibits forced labour.
3. Article 24 prohibits the employment of children (below the age of fourteen years) in factories, etc.
4. Article 39 directs the State to secure the health and strength of workers, men and women, and to see the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength.
5. The Bonded Labour System (Abolition) Act, 1976: The objective of the Act is to provide for the abolition of bonded labour system.
6. Contract Labour (Regulation and Abolition) Act, 1970 is enacted to introduce better working conditions and minimize exploitation of contract labourers
7. Interstate migrant workmen (regulation and employment conditions of service) Act, 1979 was enacted to regulate the working conditions of inter-state labourers in Indian labour law.

International convention:

India has also ratified the ILO Abolition of Forced Labour Convention, 1957 (No. 105).

Remedial measures:

1. Central Sector Scheme for Rehabilitation of Bonded Labourers (2016)
2. Ujjawala scheme: Initiated by the Ministry of Women and Child Development, the scheme provides shelter and rehabilitation for female victims of trafficking
3. Financial assistance to the extent of Rs. 3 lakhs is provided to released bonded labourers along with other non-cash assistance for their livelihood.

14. கையால் துப்புரவு செய்பவர்களின் வாழ்க்கையை மேம்படுத்த சஃபாய் கரம்சாரிகளுக்கான தேசிய ஆணையத்தின் பங்கு என்ன?

What is the role of national Commission for safai karamcharis to uplift the life of Manual Scavengers?

1. Manual scavenging is the “removal of human excreta from public streets and dry latrines,
2. Cleaning of cesspools, sewers and drains” is defined as.
3. **Established:** 1993
4. Make its recommendations to the Government regarding specific schemes for the welfare of Safai officials as per the provisions of NCSK Act 1993.
5. The NCSK Act came into force from 29 February 2004.
6. Thereafter the tenure of NCSK has been extended as a non-statutory body from time to time by resolutions.
7. It examines and evaluates existing welfare schemes for Safai officials.

8. Investigates cases such as specific grievances.
9. The Chairman and members of the Commission undertake an extensive tour of the country
10. To study the socio-economic and living conditions of Safai Karamsharis and their dependents.
11. The Commission calls for factual statements regarding these complaints/petitions from the concerned authorities and engages them to redress the grievances of the affected Safai officials.
12. **Status:** According to NCSK (2020 data), a total of 631 people have died while cleaning sewers and cesspools in the country in the last 10 years.
13. Large number of manual scavengers in 2019.
14. 110 workers were killed while cleaning drains and cesspools
15. According to the data collected in 2018, 29,923 people are involved in manual scavenging in Uttar Pradesh,
16. This is the highest in any state in India.

Prevention of Atrocities Act:

1. In 1989, the Prevention of Harassment Act became a unified policy for sanitation workers;
2. More than 90% of the people who worked as scavengers belonged to Scheduled Castes.
3. It became a landmark for freeing manual scavengers from designated traditional occupations.
4. National Safai Karamcharis Finance and Development Corporation:
5. It is a non-profit organization under the Ministry of Social Justice and Empowerment
6. The primary objective of this organization is to develop Safai officials
7. Planters and their dependents socially and economically. Prohibition of Employment of Manual Scavengers and Their Rehabilitation Act, 2013
8. The law prohibits the employment of manual scavengers,
9. Manual cleaning of drains and septic tanks without protective equipment,
10. Construction of unsanitary toilets. No person, local body or agency (such as municipal corporations) shall engage or employ persons to clean sewers and cesspools in a hazardous manner.
11. Mechanical cleaning of septic tanks is a recommended practice. Rehabilitation and alternative employment of manual scavengers.
12. Every local body, Cantonment Board and Railway Authority shall be responsible for survey of unsanitary toilets within its jurisdiction.
13. Unsanitary toilets shall be responsible for replacing or demolishing the toilet at his own cost.

15. பெற்றோர் மற்றும் முத்த குடும்பங்களின் பராமரிப்பு மற்றும் நலச் சட்டம், 2007ன் முக்கிய விதிகளைப் பற்றி விவாதிக்க.

Discuss the major provisions of The Maintenance and Welfare of Parents and Senior Citizens Act, 2007.

1. As per National Elderly Policy, everyone 60 or older is considered elderly
2. Right to dignity, health, and shelter are statutory rights of elderly.
3. Challenges
4. Abandonment by their families,
5. Destitution,
6. Homelessness,
7. Inability to access quality health care,
8. Low levels of institutional support,
9. Loneliness and depression
10. Separation from their families
11. The Maintenance and Welfare of Parents and Senior Citizens 2007
12. Legal obligation for children and heirs to provide maintenance to senior citizens.

13. This Act makes it legally for the adult children and heirs to provide for parents by way of a monthly allowance.
14. Such a transfer of property shall be considered to have been made by fraud or by coercion or under undue influence. Such a transfer can be made void.
15. It also permits state governments to establish old age homes in every district.
16. Senior citizens who are unable to maintain themselves shall have the right to apply to a maintenance tribunal seeking a monthly allowance from their children or heirs.
17. State governments may set up maintenance tribunals in every sub-division to decide the level of maintenance. Appellate tribunals may be established at the district level.
18. State governments shall set the maximum monthly maintenance allowance.
19. The maximum monthly allowance at Rs 10,000 per month.
20. Punishment for not paying the required monthly allowance shall be Rs 5,000 or up to three months imprisonment or both
21. Abandoning a senior citizen in any place is a criminal offence.

16. ஏதேனும் மூன்றிற்கு விடை அளிக்க: Attempt any three:

(i) மகளிர் தொழில் கூட்டுறவு சங்கங்கள்.

Women Industrial Cooperative Societies.

1. To ensure Gender equality by empowering women by providing them with skill and knowledge
2. These Industrial Co-operative societies are exclusively for women
3. Women in the age of 18-40 years and below poverty line can become the members
4. There are 99 Women Industrial Co-Operative Societies
5. 1 Transgender Industrial Co-operative Society
6. 25 Women Weaving Food manufacturing societies are functioning

Works:

Stitching and supplying of Uniforms to the School Children.

(ii) “SAKHI” - ஒருநிறுத்த நெருக்கடி மையம் (OSCC).

“SAKHI” One Stop Crisis Centre (OSCC).

1. **Ministry :** Ministry of Women and Child Development
2. **Aim:** provide integrated services for women affected with violence.

Scheme:

3. It is being implemented since April 1, 2015.
4. It is funded from Nirbhaya Fund.
5. It is a centrally sponsored scheme
6. It provides police assistance,
7. Legal aid and case management,
8. Psychosocial counselling
9. Temporary support services to women affected by violence.
10. All women including girls below 18 years of age
11. Government has decided to set up OSCs at the ten foreign missions of India.

(iii) தேசிய உணவுப் பாதுகாப்புச் சட்டம், 2013

National food security Act, 2013

1. Government provides food grains under the act and it makes legal right
2. Rice at Rs 3 per kg,
3. Wheat at Rs 2 per kg, and

4. Coarse grains at Rs 1 per kg
5. To ensure people's food and nutritional security by assuring access to enough high-quality food at reasonable prices.
6. NFSA covers 50 per cent of the urban population
7. 75 per cent of the rural population.
8. Two categories of beneficiary households
9. **Antyodaya Anna Yojana (AAY):** entitled to 35 kg of foodgrains per month
10. **The Priority Households:** food grains depending on the number of family members (each member 5 kg per month).

(iv) பெண்களை அநாகரீகமாக பிரதிநிதித்துவம் செய்தல் தடை சட்டம், 1986.

Indecent representation of women (prohibition) Act, 1986.

Ministry of Women and Child Development:

1. Indecent Representation of Women Act, 1986
2. The Ministry has proposed amendment in definition of the term advertisement to include digital form or electronic form or hoardings, or through SMS, MMS, etc
3. It has also proposed setting up a Central authority under the National Commission of Women,
4. Indecent Representation of Women Act, 1986
5. It was enacted to prohibit indecent representation of women through advertisement or in publications, writings, paintings, figures or in any other manner.
6. The IRW Act provides for punishment of up to two years in jail for an offence committed for the first time and imprisonment of six months to five years for a second conviction.
7. Sections 67 and 67A of the IT Act lay down a punishment of three to five years for circulating obscene material and five to seven years for circulating sexually explicit material respectively.

17. தமிழ்நாட்டில் சமூக நல நிர்வாகம் எதிர்கொள்ளும் முக்கிய சவால்களை பட்டியலிடுக.

List out the key challenges faced by Social Welfare Administration in Tamil Nadu.

Challenges in the social welfare Administration in Tamilnadu:

1. No proper identification of beneficiaries
2. Poor financing
3. Corruption
4. Social Equity
5. Bureaucratic Apathy
6. Corruption
7. No accountability
8. Red tapism
9. Lack of cooperation among various departments
10. Rigid system
11. Political interferences
12. Poor decision making
13. Poor innovations
14. No proper data
15. Discontinuity of programmes

18. சமூக நலன் சார்ந்த நிர்வாகத்தின் முக்கியத்துவம் பற்றி எழுதுக.

Write about the importance of Social Welfare Administration.

1. Social welfare administration is a process through which social policy is transformed into social services.
2. It involves the administration of public and private agencies

Main objectives:

1. Improve the standard of living of peoples
2. To support their livelihoods and provide them with equal opportunities.
3. Its main focus is on the suitability and accessibility of social services
4. Social work enables the process of administration through guidance, planning, stimulation, Organisation, creating structure, coordination, and research.
5. Social Welfare –To protect Marginalised and Vulnerable Sections
6. Transgender welfare
7. Scheduled Class welfare
8. Scheduled Tribes Welfare
9. Backwards community
10. Minority Welfare
11. Differently-abled welfare
12. Women and Child Development
13. Senior Citizen Welfare
14. Poverty Alleviation

19. ஏதேனும் மூன்றிற்கு விடை அளிக்க: Attempt any three:

(i) புதிய இந்தியா எழுத்தறிவு திட்டம்(NILP)

New India Literacy Programme (NILP)

1. “New India Literacy Programme” (NILP)
2. Ministry of Education, Government of India.
3. Centrally Sponsored Scheme
4. Implementation during five years from 2022-23 to 2026-27
5. Target of 5.00 crore learners during the five years under Foundational Literacy and Numeracy component.

Key Objectives:

1. Foundational Literacy and Numeracy,
2. Critical Life Skills
3. Vocational Skills Development,
4. Basic Education
5. Continuing Education.

(ii) தமிழ்நாடு பல்கலைக்கழகங்கள் சட்டங்கள் (திருத்த) சட்டம், 2022

Tamil Nadu Universities Laws (Amendment) Act, 2022

1. The Bills states that “every appointment of the Vice-Chancellor shall be made by the Government from out of a panel of three names”
2. Recommended by a search-cum-selection committee.
3. The Chancellor of state universities -governor has the power to pick a VC from the shortlisted names.
4. The Bills also seek to empower the state government to have the final word on the removal of VCs, if needed.

5. Removal will be carried out based on inquiries by a retired High Court judge or a bureaucrat who has served at least as a Chief Secretary.

(iii) காவிரி நெற்கு வனவிலங்கு சரணாலயம்.

Cauvery South Wildlife Sanctuary.

1. Reserve forests of Krishnagiri and Dharmapuri
2. The declaration was made under the Wildlife Protection Act, 1972.
3. 17th wildlife sanctuary in Tamil Nadu
4. Area of 686.406 sq. Km.
5. It is home to 35 mammal species
6. 238 bird species.
7. Leith's soft shelled turtles
8. Smooth coated otters
9. Marsh crocodiles
10. Four horned antelopes.
11. Cauvery South Wildlife Sanctuary connects the Cauvery North Wildlife Sanctuary of Tamil Nadu with the Cauvery Wildlife Sanctuary in the neighbouring state of Karnataka.
12. It hosts two elephant corridors – the Nandimangalam-Ulibanda Corridor and the Kovaipallam-Anebiddahalla Corridor.
13. Ecosystem conservation of Cauvery basin critical for the protection of riverine species that are dependent on Cauvery River.

(iv) 44வது (FIDE) செஸ் ஒலிம்பியாட் 2022

44th (FIDE) Chess Olympiad 2022

1. 44th Chess Olympiad will be held in Chennai in 2022.
2. The prestigious competition, which has been organized since 1927, is being hosted in India for the first time and in Asia after 30 years.
3. With 189 countries participating, this will be the largest participation in any Chess Olympiad.
4. The International Chess Federation (FIDE) is the governing body of the sport of chess, and it regulates all international chess competitions.
5. FIDE currently has its headquarters in Lausanne (Switzerland)

20. 'கல்வி என்பது மனித உரிமை' - கருத்துரைக்க.

'Education is a Human right' – Comment.

1. The Education for All movement is a global commitment to provide quality basic education for all children, youth and adult
2. UDHR Rights- Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages
3. Quality education aims to ensure the development of a fully-rounded human being.
4. Education is the most powerful tools in lifting socially excluded children and adults
5. It exclude out of poverty and into society
6. It narrows the gender gap for girls and women
7. Each year of schooling reduces the probability of infant mortality by 5 to 10 per cent.
8. Elementary education shall be compulsory.
9. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit

10. The 86th Constitutional Amendment Act established the Right to Education as a fundamental right in 2002 under Indian constitution
 11. The Sarva Shiksha Abhiyan was established, with the goal of providing “useful and relevant primary education” to all children aged six to fourteen.
 12. The Right to Education (RTE) Act of 2009, which focuses on universal education and mandates the inclusion of impoverished children in schools.
 13. IT provides for a 25% reserve of places in unaided schools for students from economically disadvantaged sections and groupings.
 14. Ambitions for education are essentially captured in Sustainable Development Goal 4 (SDG 4) of the 2030 Agenda
 15. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all” by 203
 16. UNESCO is responsible for coordinating the international community to achieve this goal through partnerships, policy guidance, capacity development
 17. UNESCO data shows that if all adults completed secondary education, globally the number of poor people could be reduced by more than half
 18. For this human right to work there must be equality of opportunity, universal access, and enforceable and monitored quality standards.
21. ‘நன்கு கல்வி பெற்ற பணியாளர்கள் மாநில செழிப்புக்கு முக்கியம்’ - நியாயப்படுத்துக.
 ‘A Well-Educated Workforce is Key to State Prosperity’ - Justify.
1. A growing economy such as India need to ensuring decent work and skill.
 2. India requires a large pool of skilled workers
 3. Only 37.22% of surveyed people were found employable – 34.26% among males and 37.88% among females.
 4. 86.1% of those between 15 and 59 years had not received any vocational training.
- Gross enrollment ratio:**
1. The percentage of students belonging to the eligible age group enrolled in higher education in 2019-20 is 27.1%
 2. Strategy to provide a new set of skills through vocational training in order to effectively absorb this additional workforce and sustain economic growth.
 3. Incomes and wages can increase across an economy when productivity—production per capita—increases.
 4. The role of education in the overall development
 5. Reduces Poverty
 6. Women Empowerment
 7. Social Development
 8. Political participation
 9. Increases individual earnings
 10. Reduces economic inequalities
 11. People’s health
 12. Increase National income
 13. States can build a strong foundation for economic success and shared prosperity by investing in education.

14. Providing expanded access to high quality education will not only expand economic opportunity for residents,
15. To strengthen the overall state economy (Gross domestic product) than anything else a state government can do.
16. Investing in education is also good for state budgets to prosper.

22. அஸ்ஸாம் - மேகாலயா எல்லைப் பிரச்சனை மற்றும் இரு மாநிலங்களுக்கு இடையே சமீபத்தில் கையெழுத்தான ஒப்பந்தம் பற்றி விவாதிக்க.

Discuss about the Assam – Meghalaya Border Dispute and recently signed agreement between these two states.

1. Assam-Meghalaya Border Dispute is a 50-year-old issue
2. Assam and Meghalaya have a longstanding dispute in 12 stretches of their 884-km shared border.
3. The Assam-Meghalaya border dispute are the areas of Upper Tarabari, Gazang reserve forest
4. Hahim, Langpih, Borduar, Boklapara, Nongwah, Matamur, Khanapara-Pilangkata, Deshdemoreah Block I and Block II, Khanduli and Retacherra.
5. During British period undivided Assam included present-day Nagaland, Arunachal Pradesh, Meghalaya and Mizoram.
6. Meghalaya was bifurcated out in 1972,
7. Boundaries demarcated as per the Assam Reorganisation (Meghalaya) Act of 1969 but has held a different opinions of the border.
8. In 2011, the Meghalaya government had identified 12 areas of difference with Assam, spread over approximately 2,700 sq km.
9. Draft resolution on and agreement signed on march 2022
10. Assam and Meghalaya partially resolved a 50-year-old dispute along their 884.9 km boundary.
11. The agreement is expected to pave the way for resolving disputes in the remaining sectors of the Assam-Meghalaya boundary
12. Similar areas of difference between Assam and three other northeastern States.
13. The agreement ensures the cooperative federalism and paves a way for the resolution of other boundary disputes between states.

23. நிர்வாகத்தில் சமூக ஊடகங்களின் பங்கினை விளக்குக மேலும் அதன் நன்மைகளை பட்டியலிடுக.

Elucidate the role of Social Media in Governance and list out its advantages.

1. **Source of information:** unbiased information is important for a democracy and its growth
2. Media help in providing critical information to citizens. E.g government schemes
3. **Educate:** Media is important to educate people on issues that are of utmost important for the society
4. **Awareness:** Media make society aware of their democratic rights and fight the three institutions of democracy.
5. **Ensuring Justice:** Media plays an important role in ensuring justice and benefits of the government policies reaching the weaker sections of the society.
6. **Watchdog:** Media reporting on public affairs and investigations into wrongdoing in the administration of public affairs
7. **Good Governance:** Media plays an important role in audit of the government policies and spending.
8. **Accountability:** Media ensure accountability of government by exposing bad state of democracy.
9. **Dissemination of government policies:** Media is important for spreading and disseminating various government policies and initiatives.

Advantages:

1. Engage with the public
2. Crisis communication like covid
3. Democratisation of Information
4. Wider and Heterogeneous Communities
5. Direct Interaction With Government eg: grievance redressal like CPGRAMS

24. இந்தியாவில் சிறுபான்மையின மக்களுக்காக பல்வேறு நலத்திட்டங்களை விளக்குங்கள்.

Explain the various welfare schemes of minorities in India.

1. Maulana Azad Fellowship Scheme (MANF) to provide five-year fellowships in the form of financial assistance to students belonging to six notified minority communities.
2. Bado Pardesh” – Interest Subsidy Scheme on Educational Loans for Overseas Studies for students belonging to minority communities.
3. Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS), is a capacity initiative of the Ministry of Minority Affairs focusing on the skill, entrepreneurship and leadership training needs of minority and artisan communities across the country.
4. Upgrading the Skill and Training in Traditional arts/crafts for the Development (USTTAD - Upgrading the Skill and Training in Traditional arts/crafts for the Development).
5. Expose traditional art and craft skills including cooking skills of minorities through exhibition which will also provide them with a platform for business opportunity.
6. Nai Manzil – An integrated education and livelihood initiative for minority communities, the scheme aims to benefit minority youth who do not have a formal school leaving certificate.
7. The Pradhan Mantri Jan Vikas Karyakram (PMJVK) – Development of infrastructure projects which are social assets in identified areas with developmental deficiencies for socio-economic development of the said areas.
8. Maulana Azad Education Foundation (MAEF) – An organization created to formulate and implement educational programs for the benefit of educationally disadvantaged minorities.
9. All these schemes empower the minority communities and create an environment to strengthen the multi-racial, multi-ethnic, multi-cultural, multi-lingual and multi-religious nature of our nation.
10. To improve the socio-economic conditions of minority communities through affirmative action and inclusive development.

25. முதலமைச்சரின் பெண் குழந்தைகள் பாதுகாப்பு திட்டம் குறித்து விளக்கவும்.

Explain Chief Minister's Girls child protection scheme.

1. Chief Minister's Girl Child Protection Scheme was launched in 1992. To ensure the education of the girl child and protect her rights, the government has launched this scheme of direct deposit fund investment in the name of the girl child.
2. By ensuring gender equality, girls are also adequately represented, qualified and able to participate in the development process. Gender equality means providing equal opportunities to both boys and girls in education, medicine, economics and politics. Girls are subjected to gender discrimination and are considered a burden even today in a patriarchal society. Therefore, the government is taking appropriate measures to educate and empower girl children and empower them.
3. Government of Tamil Nadu implements Girl Child Protection Program to protect the welfare of girl child to eradicate female infanticide, curb the trend of male child preference and encourage family planning.
4. Fixed deposit in the name of girl children under this scheme is invested in “Tamil Nadu Electricity

Fund and Infrastructure Development Corporation”. A copy of the receipt of this deposit is given to the girl child's family. After the girl child attains 18 years of age, the deposit with accumulated interest is paid as maturity amount towards higher education.

Objectives of the project:

1. Ensuring girl child education up to at least class 10 and encouraging them to pursue higher education.
2. Encouraging attitude of marrying after 18 years in girl child.
3. Encouraging parents to adopt family planning with two female children.
4. Ensuring the contribution of the family to develop the empowerment skills of the girl child.
5. Protecting the rights of the girl child and providing socio-economic development.

Types of Project:

Scheme-I

Under this scheme, if only one girl child is born in a family, a fixed deposit of Rs.50, 000/- is invested in the Tamil Nadu Electricity Fund and Infrastructure Development Corporation in the name of the girl child. A copy of the receipt of this deposit is given to the family of the girl child.

Scheme-II

Under this scheme where there are only two female children in a family, a fixed deposit of Rs.25, 000/each in the name of each female child is invested in the Tamil Nadu Electricity Fund and Infrastructure Development Corporation. Copies of these deposit receipts are given to the girl child's family.

Eligibility requirements to avail the scheme:

1. There should be only one girl/two girls in the family. Should not have a male child and should not adopt a male child in future.
2. One of the parents must have undergone sterilization before the age of 40.
3. At the time of application, the parents of the children must have been a continuous resident of Tamil Nadu for 10 years.
4. Annual family income should be within Rs.72, 000/-. In scheme-1, the child should apply before the completion of 3 years of age and in scheme-2 the second child should apply before the completion of 3 years of the scheme.
5. If there is more than one girl child during first and second births, they will get benefit under Scheme 2.

Beneficiaries of the scheme:

1. Under this scheme till March 2022 10, 46,605 girl children have been registered and an amount of Rs.1705.52 crore has been deposited. In the financial year 2021-2022, 33,359 girl children have been registered under this scheme and an amount of Rs.83.45 crore has been deposited.
 2. From 2015 to March 2021, 26,561 girl children have been given maturity amount of Rs.76.44 crore through Tamil Nadu Electricity Fund and Infrastructure Development Corporation.
 3. Due to continuous efforts of the government, 30,114 girl children have been given maturity amount of Rs.90.18 crore in the year 2021-22.
 4. In the budget estimate for the year 2022-2023, a fund allocation of Rs.92.00 crore has been made.
26. இந்தியாவில் குழந்தை தொழிலாளர் முறையை தடுப்பதற்கான அரசியலமைப்பு நடவடிக்கைகளை பட்டியலிடுக.

List out the constitutional measures to prevent child labor in India.

i. Article 14: Equal before law:

The Government shall not deny to any person the protection of equality before the law under the Government of India.

ii. Article 15: Prohibition of discrimination based on religion, race, caste, sex or origin:

Government shall not discriminate against any citizen on the basis of religion, race, caste, sex, birth or any of these.

iii. Article 21: Protection of life and physical rights:

A person's life or bodily rights shall not be deprived except in accordance with the procedure laid down by law.

iv. Article 21(u): Right to Education:

The Government should arrange for free compulsory education for all minors between the ages of six and fourteen years in such manner as may be determined by law.

v. Verse 23:

Prohibition of human trafficking and forced labour

vi. Article 24: Prohibition of employment of minors in factories etc:

No minor below fourteen years of age shall be employed in any factory or factory. And not engaging in any other risky employment.

vii. Article 39 Nu and Ku:

It enables government programs to protect the health and strength of workers and children against violent abuses and provide opportunities for healthy development of children.

viii. In Schedule-11 under Article 243B:

1. Section 17 – Education including primary and secondary schools
2. Section 23 - Hygiene and health including hospitals, primary health centers and dispensaries.
3. Article 25 – Empowers Gram Panchayat to promote women and child development.

ix. Article 45: Provision for early childhood care and education of minors under six years of age:

Government should make concerted efforts to provide early childhood care and education to all children up to the age of six years.

x. Article 47: Duty of the State to raise the standard of nutrition, standard of living and improve the health of the people:

The government should consider that raising the standard of food and living standards of the people and improving the health of the people is one of its main duties. More specifically, the government should make efforts to prohibit the consumption of intoxicating liquors and medicinal substances that are harmful to health.

27. இந்தியாவில் வறுமையை மதிப்பிடுவது ஏன் மிகவும் கடினமாக கருதப்படுகிறது?

Why is it considered so difficult to assess poverty in India?

1. Irregular assessment
2. Over population
3. Migrant people
4. Errors in calculation method
5. Overpopulation
6. Lack of data
7. Falsified data
8. Lack of Access
9. Data Reduction
10. Poor resource allocation
12. Illiteracy
13. Lack of awareness

28. மனிதக் கழிவுகளை கையால் சுத்தம் செய்யும் வேலைக்கு எதிரான அரசியலமைப்பு சட்ட பாதுகாப்புகள் யாவை.

What are the constitutional protections against manual scavenging of human waste?

1. Manual scavenging is the manual scavenging of human excreta from railway tracks, unsanitary latrines, open drains or cesspits.
2. Promotion of fraternity among citizens and upholding the dignity of individual is one of the objectives in the Preamble and under Article 14 of the Constitution. The people involved in it are considered untouchables and are denied the right to equality.
3. According to Article 17. (Abolition of Untouchability) “Untouchability” is abolished and its practice in any form is prohibited.
4. An offense punishable under any applicable law establishing untouchability.
5. Article 21 of the Constitution: The fundamental rights guaranteed in Part III of the Constitution include the right to life with dignity.
6. Article 23 of the Constitution: Prohibits forced labor
7. Article 46 of the Constitution: states that the weaker sections, particularly the Scheduled Castes and Scheduled Tribes, shall be protected from social injustice and all forms of exploitation.
8. Clause (n) and Clause (c) of Article 243P of the Constitution relating to a Municipality or Panchayat defines sanitation.

29. வறுமை என்றால் என்ன? வறுமையின் பல்வேறு வகைப்பாடுகளை விளக்குக.

What is poverty? Explain different classifications of poverty.

Based on social, economic and political aspects, there are different ways to identify the type of poverty:

- i. Absolute poverty.
- ii. Comparative poverty.
- iii. Circumstance poverty.
- iv. Generational poverty.
- v. Rural poverty.
- vi. Urban poverty.

1. Absolute poverty: Also known as extreme poverty or abject poverty. This includes lack of basic food, clean water, sanitation, shelter, education and information.
2. Comparative Poverty: Defined from the point of view of comparing one's standard of living with the economic standards of the people living in the neighbourhood.
3. Situational poverty: A temporary type of poverty based on events such as environmental disaster, job loss and serious health problems.
4. Generational poverty: It is passed from one generation to the next. It's more complicated because it's inescapable because people don't have access to the help they need to get out of it.
5. Rural poverty: It occurs in rural areas with a population of less than 50,000. This is due to less employment opportunities, less access to services, less support for people with disabilities and less opportunities for quality education.
6. Urban poverty: It occurs in metropolitan areas with a population of more than 50,000. Some of the key challenges faced by the urban poor are:
 7. Limited access to health and education.
 8. Lack of housing and basic needs.
 9. Environmental damage and unhealthy environment due to overcrowding.
 10. Little or no social security mechanism.

30. கருப்பு பணம் என்றால் என்ன? அதற்கான காரணங்கள் மற்றும் தீர்வுகள் குறித்து எழுதுக.

What is Black Money? Write about its causes and remedies.

Black Money:

- 1) Income involved in black market (a) Untaxed income.
- 2) Unaccounted money hidden from the taxman

Causes of Black Money:**1) Scarcity of materials**

1. Black money is a source of scarcity of goods either natural or (a) artificial.
2. Successive restrictions are introduced to curb black money.

2) Licensing procedure

1. System of control permits, quotas, licenses is associated with mis-distribution due to under-supply of goods.
2. This increases black money.

3) Role of industry

1. Regulator of limited PSUs procures goods at very low cost.
2. But he charges more for the product. It does not show this difference in private.

4) Kidnapping

1. When India had rigid exchange systems, high-cost commodities such as gold, silver, textiles, and electronics were subject to customs duties.
2. Bringing these goods in defiance of the authorities is smuggling.

5) Structure of tax

When the rate of tax is high, it causes the emergence of black money.

Recent Efforts to Control Black Money in India:

1. A Special Inquiry Committee on Black Money was set up under 2 retired judges of the Supreme Court.
2. Black Money (Undisclosed Foreign Income (M) Assets) and Taxation Act - 2015
3. A special committee was set up to investigate the revelations of recent currency leaks in Panama.
4. Double taxation avoidance agreements.
5. Foreign Account Tax Compliance Act.
6. Prevention of Money Laundering Act- 2002
7. Benami Transactions (Prohibition) Amendment Act - 2016
8. Clean Money Operation 2017, Commencement on 31st January
9. Lokpal, Lok Ayukta Act
10. The Real Estate (Regulatory (M) Development) Act - 2016
11. Devaluation – November 8, 2016
12. THE FUGITIVE ECONOMIC OFFENDERS ACT, 2018.
13. India is a member of the International Financial Supervisory Service (FATF).

(15 MARKS)

1. தேசிய மக்கள் தொகைக் கொள்கை 2000 இன் முக்கிய சாதனைகள் யாவை?

What are the major achievements of the National Population Policy 2000?

- ✓ Total Fertility Rate (TFR) has decreased from 2.9 in 2005 to 2.2 in 2017 (SRS).
- ✓ 25 out of 37 States and Union Territories have already achieved a fertility rate of 2.1 or less.
- ✓ The decadal growth has declined from 21.54% in 1999-2000 to 17.54% in 2001-11.
- ✓ Approximate birth rate has decreased from 23.8 to 20.2 from 2005 to 2017.
- ✓ Adolescent birth rate has halved from 16% (NFHS III) to 8% (NFHS IV).
- ✓ Sex ratio has increased.
- ✓ Universal immunization program for all children against preventable diseases.
- ✓ Polio prevention was fully implemented.

- ✓ Infections are controlled.
- ✓ Death rate decreased.
- ✓ Female literacy rate has increased.
- ✓ Sustainable growth rate targets achieved.
- ✓ IMR MMR NMR reduction.
- ✓ Malnutrition problem is reduced.
- ✓ Family planning has increased
- ✓ 80% deliveries are attended by accredited institutions and 100% by trained personnel.
- ✓ Progress against child marriage.
- ✓ 100% registration of birth, death, marriage and pregnancy. Promoting alternative medicine
- ✓ Universal Health Coverage – Ayushman Bharat.

2. வேலையில்லா திட்டாட்டத்திற்கு எதிராக தமிழக அரசு எடுத்த நடவடிக்கைகள் என்ன? அதன் செயல்பாடுகளை விரிவாக விளக்குக.

What are the measures taken by government of Tamil Nadu against unemployment problem? Explain its activities in detail.

- ✓ Tamil Nadu Urban Employment Scheme.
- ✓ Special vocational guidance center for tribals.
- ✓ Training and Guidance Centers for SC / ST.
- ✓ Special centers for the differently abled.
- ✓ Aptitude Tamil Nadu Magazine and Publications.
- ✓ Career Awareness and Skills Week.
- ✓ Free coaching classes in colleges.
- ✓ Unemployment Assistance Scheme for unemployed youth.
- ✓ Private sector employment.
- ✓ Free coaching classes for competitive exams through television.

Long Term Skill Training Programs:

- ✓ Artisan Training Scheme (CTS).
- ✓ Development of Government ITIs through PPP mode.
- ✓ Capacity strengthening to improve industrial value.
- ✓ Sample ITI
- ✓ Apprenticeship Training Program (ATS).
- ✓ National Apprenticeship Promotion Scheme (NAPS).
- ✓ Industrial Schools (IS).

3. இந்தியாவில் புலம்பெயர்ந்த தொழிலாளர்களின் நலனை நோக்கமாகக் கொண்ட முக்கிய திட்டங்கள் யாவை?

What are the major schemes aimed at the welfare of migrant labours in India?

Jananisree Bhima Yojana:

- ✓ The scheme was launched to provide life insurance to people living below poverty line in rural and urban areas. Jananisree Bhima Yojana was launched in 2000.

Eligibility:

- ✓ Candidates should be between 18-59 years.
- ✓ He or she should be below the poverty line.

Scholarship:

- ✓ In case of natural death the nominee will get Rs 30,000.
- ✓ In case of death or permanent disability due to accident he will get Rs 75,000.
- ✓ Compensation for partial permanent disability due to accident is Rs 37,500.

Aam Aadmi Bhima Yojana

- ✓ It provides social security and financial assistance to people living in urban areas. This applies to people living in rural areas who do not have access to the facilities of premium hospitals. Aam Aadmi Bhima Yojana was established in 2007.

Eligibility:

- ✓ Candidates should be between 18-59 years.
- ✓ He or she should be above the poverty line.

Scholarship:

- ✓ In case of natural death the nominee will get Rs 30,000.
- ✓ In case of death or permanent disability due to accident he will get Rs 75,000.
- ✓ Compensation for partial permanent disability due to accident is Rs 37,500.

Rashtriya Swasthya Bhima Yojana

- ✓ A scheme launched by the state government to provide health insurance to people living below the poverty line. The Rashtriya Swasthya Bhima Yojana scheme was implemented in 2015.

Eligibility Limit:

- ✓ Registered member of Welfare Board.
- ✓ Applicants should belong to the unorganized sector.
- ✓ Candidates should be of BPL status.

Scholarship:

- ✓ Each family member will be insured up to Rs 30,000 with Rs 100 for transport charges and a maximum of Rs 1,000.

Mahatma Gandhi Bunkar Bhima Yojana

- ✓ This is a scheme started by the government for the welfare of migrant workers engaged in handloom industry. It provides coverage against any accident leading to death, permanent or partial disability. Mahatma Gandhi Bunkar Bhima Yojana was launched in 2005.

Eligibility Limit:

- ✓ He/she should be earning at least 50 moo from handloom weaving.
- ✓ Age 18 to 59.
- ✓ Applicants should be a regular member of the cooperative society.

Scholarship:

- ✓ Annual installment payable is Rs.470 and in case of natural death, Rs.60,000 is also provided. 1,50,000 are given to the account of beneficiaries in case of accidental death. 1,50,000 is provided on account of beneficiaries in case of total disability.

Garib Kalyan Roskar Yojana

- ✓ Chulanpayasa Ludhadaye was started to employ the laborers who had returned from the cities. 50,000 crore has been earmarked for this scheme.

Features of this program:

- ✓ 25 projects have been identified – temporary drinking water, garden, rural housing.
- ✓ Development of rural infrastructure.
- ✓ This scheme has been implemented in 116 districts.
- ✓ The duration of the project is 125 days.
- ✓ It is launched to improve livelihood opportunities for migrant workers.

4. இந்தியாவில் நிலவும் கல்வியறிவின்மைக்கான காரணங்கள், விளைவுகள் மற்றும் தீர்வு முறைகளை பற்றி விவரி.

Write about the causes, impact, and remedial measures of illiteracy in India.

1. Illiteracy means illiteracy.
2. According to 2011 census the overall literacy rate in India is 74%

3. 82 percent of these are males
4. Women 65 percent
5. Kerala is the most educated state
6. Bihar is the least educated state.

Reasons for Ignorance:

1. Ignorance of the importance of education
2. Illiteracy of parents
3. Lack of family support
4. Social constraints
5. Low economic status
6. Poverty etc. have been identified as important causes.

Effects of lack of education:

1. Barrier to progress in society
2. Barrier to economic progress
3. Poverty
4. Child marriage
5. Deterioration of human resources
6. Crime in society
7. Low revenue.

Steps taken to address illiteracy in India:

1. National Education Policy 1968
 2. National Education Policy 1986
 3. National Education Policy 1992
 4. TSR Subramanian Committee
 5. Kasthuri Rangan Committee
 6. New Education Policy 2020
 7. Samakara Siksha Abhiyan
 8. Mid-day meal plan
5. பெண்களுக்கு அதிகாரம் அளிப்பதற்கான மாநில அரசின் பல்வேறு நலத்திட்டங்களை விவரிக்க.

Enumerate the various welfare State government schemes associated with empowerment of women.

1. Muvalur Ramamirtham Ammaiyar Marriage Financial Assistance Scheme.
2. It is a scheme to provide marriage financial assistance to women.
3. The scheme for 2022 is Muvalur Ramamirtham Ammaiyar Higher Education Assurance Scheme.
4. According to this scheme, financial assistance of around one thousand rupees per month will be given to the girl students who are studying in government schools from 6th to 12th standard and going for higher education.
5. This amount will be paid till they complete their education.

Girl Child Protection Scheme:

1. 1992 A scheme to adopt and protect abandoned girl children.
2. Appointment of Women in Police Scheme 1973.
3. Scheme 1990 to provide 30 percent reservation for women in government jobs.
4. Hostel scheme for women, the government has implemented a hostel scheme for working women in urban areas.
5. The 73rd and 74th Amendment introduced 33 percent reservation for women in local bodies to ensure political representation of women.
6. The allotment of seats is done on a 50 percent allotment basis as per the Tamil Nadu Panchayat Act,

2016.

7. Let's Save the Girl Child and Educate the Girl Child Project.
 8. To reduce gender discrimination and protect the girl child through this scheme and ensure their education
 9. Free travel scheme for girls by bus.
 10. Women Empowerment Center This project is being implemented to create awareness among rural women like Police Act for upliftment.
 11. State Women's Resource Center This center works to provide advice on problems faced by women and their solutions.
 12. Women's Helpline 181 This number has been introduced for women victims of violence to seek help and provide information.
6. வரதட்சணைகான காரணங்கள் மற்றும் தாக்கம் பற்றி விவரிக்க, வரதட்சணையை ஒழிப்பதற்கான நடவடிக்கைகள் பற்றி எழுதுக.

Elucidate the causes and impact of dowry, Write about remedial measures to eradicate dowry.

Dowry:

1. Dowry is a social problem.
2. Dowry is “moveable & immovable property brought by a bride from her father's house to the groom's house at the time of her marriage under the obligation of her parents (m) protection.
3. It was ceremonial in the past.
4. Many social evils occurred after it was made compulsory.

Social evils caused by dowry:

1. Female infanticide
2. Suicide
3. Arson
4. Early marriage
5. Old maidens
6. Women's lack of education
7. Divorce
8. Improper relationship
9. Depression
10. Physical abuse
11. Slavery treatment
12. Domestic violence

Reasons for Dowry:

1. Patriarchal society
2. Status of daughters as a burden and sons as an asset
3. Economic disempowerment of women
4. One who considers it an honor to receive a dowry
5. Conservative Socio-Culture
6. Nowadays parents of girls are interested in choosing a groom.
7. Greed for easy riches

Elimination measures:

1. Proper implementation of dowry prevention laws.
2. Educating women.
3. Making women self dependent.
4. Creating awareness in society.

5. Prevention of early and child marriage
 6. Changing long-standing social habits.
 7. Dowry Prohibition Act - 1961
 8. Domestic Violence (Prevention) Act - 2005
 9. Section 304 B of the Indian Penal Code, if a woman dies within 7 years of marriage, the husband (m) of her relative is punishable.
 10. Indian Penal Code - 498A
 11. Supreme Court Judgment 2009 – Prohibits dowry.
7. பெண்களுக்கு எதிரான சைபர் குற்றங்கள் பற்றி விளக்குக. சைபர் குற்றங்களை கட்டுப்படுத்த எடுக்கப்பட்ட நடவடிக்கைகள் பற்றி எழுதுக.

Discuss Cyber crime against women, Write about measures to control Cyber crime.

1. Crimes committed using technology and other technology-based devices are described as cyber crime.
2. It mostly takes place as online crime.
3. CYBER CRIMES AGAINST WOMEN According to the report of the National Crime Records Archive around 50000 cyber crimes have been registered as of 2021-2022.
4. It is slightly more than the previous year.
5. Most crimes are registered in Karnataka state.

Miscellaneous Offenses:

1. Money transaction fraud
2. Sending obscene text messages
3. Intimidation
4. Pornography depicting women in an obscene manner
5. Writing obscenities
6. Fake accounts

Cyber crimes against women are increasing due to:

1. High website usage.
 2. Ignorance of the nature of laws without awareness.
 3. Difficulty in proving guilt.
 4. Various measures taken by Govt.
 5. Information Technology Act 2000.
 6. Various sections of the Act criminalize misuse of technology.
 7. A separate police unit has been set up in all states to investigate cyber crimes.
 8. State-of-the-art laboratories have been set up for easy investigation of cyber-related cases and collection of evidence.
 9. State-of-the-art technical training is provided.
 10. ENQUIRY ORGANIZATIONS Organizations create awareness in this regard.
 11. Cyber Crime Coordination Center This center has been established to investigate various types of cyber crimes and take preventive measures related to them.
 12. Cybercrime Appeal Portal Such appeal portals have been established in all states to appeal cyber-related offences.
8. பெண்களுக்கு எதிராக நடக்கும் பல்வேறு குற்றங்களின் தன்மை, காரணம் மற்றும் பண்புகள் பற்றி விவரிக்க.

Explain nature, causes and characteristics of violence against women.

1. Criminal

Kidnapping, rape, murder understanding

2. Domestic violence

Dowry, wife beating, sexual harassment, widow and old age women.

3. Social atrocities

Forcing wife and daughter-in-law to abort a girl child Harassing women, denying women a share in property, and abusing daughters-in-law by forcing them to bring chastity.

Nature of violence**1. Rape****Victims**

1. Women between the ages of 6 – 30 are most affected by rape incidents.
2. Poor women are not the only victims.
3. Middle class women working in offices
4. Impact on the physically challenged

Research facts

1. In these incidents victim and perpetrator are already acquaintances (50% of incidents).
2. 1/10th of incidents are due to chance circumstances.
3. Often the wish is fulfilled by threatening.
4. $\frac{3}{4}$ of the incidents take place in the perpetrator's home.

2. Human Trafficking

1. Trafficking is the abduction of a minor without the consent of his legal guardian.
2. Inducing a woman to rape by flattery, deception or violence.
3. or forcing him into a marriage against his will.

Research facts

1. Unmarried women are more affected
2. Often both the kidnapper and the victim know each other
3. The initial introduction takes place at the home of either of the two.
4. Main Reason for Trafficking – Sex (a) Marriage
5. 1/10th share cause of incident – economic motive
6. Sexual assault occurs in 80% of incidents.
7. Reasons - Children growing up without adequate control is a hindrance in the relationship between husband and wife in the family.

3. Murder

1. Study Facts - About Femicide
 2. In majority of the cases the killers and the dead belong to the same family.
 3. 803 of those killed were young (25-40) years old
 4. At least 50% of women who died of homicide had children.
 5. 2/3 of incidents are unplanned outbursts.
 6. Many of the killers belonged to the lower strata of society and were of low income.
 7. 80% of murders are unaccompanied.
 8. Reasons for killing - Petty quarrels in the family, inappropriate relationships etc.
9. இந்தியாவின் பிரிவினைவாத இயக்கங்கள் பற்றி எழுது.

Write about the separatist movements of India.**Introduction:**

Separatism can be defined as a phenomenon of political fragmentation in which political actors in one or more sub-systems shift their loyalties, expectations and political activities away from jurisdictions and focus on their own core.

Separatism in India:

1. Separatism leads to the development of ethnic identities which are divisive and detrimental to national unity.
2. The separatist forces from different parts of India put forward demands either in the form of a demand for separate statehood within the Indian Union (eg Jharkhand) or in the form of a demand for a sovereign state outside the Indian Union (eg demand for Khalistan).
3. Secessionism requires a cohesive minority group that dominates a well-defined geographical area and has a strong sense of resentment against the central government.
4. The claim of separatism often fuels the flames of rebellions and revolutions with intense feelings of rage, anger, hurt and shame.
5. Many popular separatist movements have occurred in India.
This includes,
 1. Naxal-Maoist insurgency,
 2. Khalistan Movement,
 3. Assam separatist movements,
 4. Garbi separatism

Types of separatism in India:

1. Linguistic-cultural separatism,
2. Regional separatism based on economic grievances,
3. Regional separatism based on political grievances,
4. Tribal separatism,
5. Separatism is the masterminds of the soil.
6. Separate State Movement.
7. North East Reorganization Movement.
10. ஆதரவற்ற விதவைகளுக்கான இந்திய மற்றும் தமிழ்நாடு அரசின் பல்வேறு நலத் திட்டங்களைப் பட்டியலிடுக.

List out the various Welfare Schemes for Destitute Widows of Central and Tamil Nadu Government.

Home for Widows:

1. Health services,
2. Nutritious food,
3. Legal and counseling services.

SwadharGreh Scheme:

1. The Ministry of Women and Child Development.
2. Supportive institutional framework for women victims of difficult circumstances so that they could lead their life with dignity and conviction.

The Mahila Shakti Kendra Scheme:

1. Ministry of Women and Child Development
2. Aims to empower rural women through community participation and to create an environment in which they realize their full potential.

Indira Gandhi National Widow Pension Scheme (IGNWPS):

1. The Ministry of Rural Development
2. **Indira Gandhi National Widow Pension Scheme (IGNWPS)** under which Pension Scheme for Widows as well as Pension Scheme for the Elderly below poverty line are operated.

National Family Benefit Scheme (NFBS):

1. The Ministry of Rural Development
2. National Family Benefit Scheme (NFBS) under which monetary grant of Rs. 20,000

3. Given as lump sum assistance to the bereaved household in the event of death of the bread-winner.

Annapurna Scheme:

1. Ministry of Rural Development
2. Ten kg of food grain is given to those eligible aged persons who have remained uncovered under the Indira Gandhi National Old Age Pension Scheme (IGNOAPS).

DeendayalAntyodayaYojana:

1. National Rural Livelihood Mission
2. Ministry of Rural Development creating efficient and effective institutional platforms of the rural poor.

Prime Minister AwaasYojana (PMAY-G):

1. Ministry of Rural Development
2. Ministry of Housing & Urban Affairs aims at providing affordable housing for women.

NariArthikSashaktikaranYojana:

1. The Ministry of Social Justice and Empowerment
2. To support Scheduled Castes, Single Women/Widows to take up income generating activities.
3. Intergrated Programme for Older Persons:-
4. The Ministry of Social Justice and Empowerment implements Intergrated Programme for Older Persons to improve the quality of life of senior citizens.

Assistance for vocational training of widows of ex-servicemen:

1. The Ministry of Defence provides financial assistance for vocational training of widows of ex-servicemen, treatment of serious diseases of non-pensioner ex-servicemen/widows and daughter's marriage/widows' remarriage
2. Tamilnadu schemes

The E.V.R. Maniammaiya Ninaivu Marriage Assistance Scheme:

1. For Daughters of Poor Widow
2. Providing financial assistance for their daughter's married
3. Promote the educational status of poor girls.

Dr. Dharmambal Ammaiyar Ninaivu Widow Remarriage Assistance Scheme:

1. Destitute Widow Pension Scheme in Tamilnadu
2. The Applicant will be paid Rs. 1000 / month to their Bank account.
3. Free supply of text books and note books to widows children
4. Destitute Differently Abled Pension Scheme (DDAPS)
5. Chief Minister Uzhavar Padhukappu Thittam
6. Destitute / Deserted Wives Pension Scheme (DDWPS)
7. Unmarried poor women of age 50 years and above (UWP)

11. பாலின வரவு செலவுத் திட்டம் - வரையறுக்க மற்றும் அதன் பரிணாமம், நோக்கம் மற்றும் முக்கியத்துவம் பற்றி எழுதுக.

Define Gender Budgeting and Write about its Evolution, Scope and Significance.

1. It refers to creating or assessing budgets from a gender viewpoint.
2. Also known as gender-sensitive budgeting.
3. Government can set goals or targets for women
4. Equality funds allocation for both gender
5. Reduce gender disparities in opportunities and outcome
6. Public life,
7. Work,
8. Entrepreneurship,

9. Education.
10. Governments can use the budgeting process to advance equality by implementing gender budgeting.
11. The gender budget makes sure that financial commitments are made in accordance with gender commitments.
12. United Nations General Assembly passed the “International Bill of Rights for Women“, also known as the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW),
13. Schemes exclusive for women women (for ex: Beti Bachao Beti Padhao, Ujjawala, Mahila Shakti Kendra, Anganwadi, etc.)
14. Schemes allocating more finance for women (For ex: Mid-day meals program, PM POSHAN, etc.)

Significance:

1. Gender budgeting is the reduction of gender disparities.
 2. Entrepreneurship opportunities
 3. Labour participation
 4. Higher pay
 5. Education
 6. Health outcomes
 7. Governance
 8. Employee representation
 9. Top management roles.
 10. Equitable resource distribution
12. இந்தியாவில் பெண் கல்வியின் முக்கியத்துவத்தை பற்றி விளக்குக.

Illustrate the Significance of women Education in India.

1. The female education rate of India at 65.6%
2. Lower than the world average at 79.7%.
3. The situation is more critical in rural areas,
4. fewer girls go to schools as compared to boys
5. Number of dropout rate is higher among girls.

Importance:

1. Higher Social Return
2. Positive Impact of Higher Education
3. Women Can Play Leadership Roles
4. Poverty Alleviation
5. Overall development of the country
6. Women play an essential part in the country.
7. Women empowerment
8. Traditional role and change their life.
9. Reduction in inequalities
10. Participation.
11. Promotes gender equality.
12. Improves India’s literacy rate
13. Alter the regressive nature of the society.
14. Educated women are a force for change.
15. Marry later and have fewer kids.

16. Reduce infant mortality rate IMR
17. Reduce maternal mortality rate MMR
18. Growth of the population.
19. Direct role to play in their child's education.
20. More women did paid work national income will in increase
21. Idea of participation in government,
22. Panchayats,
23. Public matters
24. Elimination of gender discrimination.

13. தேசிய கல்விக் கொள்கை, 2020ன் முக்கியத்துவத்தைப் பற்றி விவாதிக்க.

Discuss the importance of National Education Policy, 2020.

Early Childhood Care and Education:

1. Guidelines for Parents & Teachers of students up to 3 years of age
2. An educational framework for students between the ages of 3-8 years

The Right to Education Act, 2009 (RTE Act):

This will allow coverage of RTE to all children between the ages of 3-18 years

Curriculum Framework:

1. Foundational - 3 years of pre-primary followed by class 1 and 2
2. Preparatory - Classes 3 to 5
3. Middle - Classes 6 to 8
4. Secondary - Classes 9-1

School Exams:

State level Exams in class 3, 5 and 8.

Higher Educational Institutions [Accreditations & Structure]:

1. Setting up NHERA (National Higher Education Regulatory Authority),
2. Separating NAAC from UGC into an autonomous and independent body
3. National Mission on Education [Through Communication & IT]

National Research Foundation:

Education Governance:

1. Financing Education -current 10% of total public expenditure to 20%
2. Vocational Courses
3. Three Language Formula
4. Universalization of education from preschool to secondary level with 100% Gross Enrolment Ratio (GER) in school education by 2030.
5. Gross Enrolment Ratio in higher education to be raised to 50% by 2035
6. Foreign universities to set up campuses in India.
7. Decrease the drop out ration mainly on girls.
8. Increase gender equality in education.

14. ஆன்லைன் சூதாட்டத்தின் தீய விளைவுகளை விமர்சன ரீதியாக ஆராய்க, மேலும் தமிழ்நாடு ஆன்லைன் சூதாட்டத் தடை மற்றும் ஆன்லைன் விளையாட்டுகள் (ஒழுங்குமுறை) அவசர சட்டம், 2022 குறித்து எழுதுக.

Critically examine the ill effects of Online Gambling, and Write about Tamil Nadu Prohibition of Online Gambling and Regulation of Online Games Ordinance, 2022.

1. Online gambling (or Internet gambling) is any kind of gambling conducted on the internet.
2. Virtual poker
3. Casinos

4. Betting
5. Market is worth around \$40 billion globally each year.
6. Sports betting operators use websites
7. Mobile applications to offer games and bets to players.
8. Peoples usually play by depositing funds to their accounts and then using those funds to bet on games.

Ill effects:

Money Laundering:

1. Money laundering is a criminal activity where profits from illegal activities are transferred into supposedly 'legal assets'.
2. Gambling at online casino susceptible to money launderers and attracting criminal activity.

Addiction and Crime:

1. Frequenting online casinos can lead to addiction.
2. It lead to all sorts of problems. Not only can gambling addiction lead to divorce, but it can also lead to a life of crime.
3. People can commit suicide or murder over a lost gambling games.
4. Computer Hacking
5. Gambling Disorder
6. Biological risk factors are genetic and increase risk of addiction by creating differences in how a person responds to gambling behaviors.
7. Psychological risk factors include depression and anxiety that lead to gambling as a way of coping with emotional pain.
8. Social risk factors relate mostly to easy access to gambling and money.
9. The Ordinance prohibits online gambling and online games of chance played for money or other stakes, including Rummy and Poker.
10. It establishes the TN Online Gaming Authority.
11. Empowers it to regulate online game providers.
12. Game providers based outside the state are required to follow specified due diligence or restrict access to prohibited games for people in TN.
13. The TN Gaming Authority may identify games of chance and recommend them to be included in the Schedule of prohibited games.
14. **Penalties:** Persons who play prohibited games shall be imprisoned for up to three months, or be fined up to Rs 5,000, or both.
15. Persons who provide prohibited games shall be imprisoned for up to three years or be fined up to Rs 10 lakh, or both.
16. The offences shall be compoundable.

15. MGNREGA திட்டத்தை விமர்சன ரீதியாக ஆராய்க.

Critically Examine MGNREGA scheme.

1. MGNREGA is one of the largest work guarantee programmes in the world
2. Launched in 2005
3. Ministry of Rural development.
4. The primary objective of the scheme is to guarantee 100 days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work.
5. As of 2022-23, there are 15.4 crore active workers under the MGNREGA.
6. Legal Right to Work: Unlike earlier employment guarantee schemes, the act aims at addressing the causes of chronic poverty through a rights-based framework.

At least one-third of beneficiaries have to be women Legal Right to Work:

1. The Act provides a legal right to employment for adult members of rural households.
2. Women labour force
3. Time-Bound Guarantee of Work
4. Employment must be provided within 15 days of being demanded to fail which an 'unemployment allowance' must be given

Decentralised Planning:

1. Panchayati Raj Institutions (PRIs) are primarily responsible for planning, implementation and monitoring of the works that are undertaken.
2. Gram Sabha's must recommend the works that are to be undertaken and at least 50 per cent of the works must be executed by them.
3. Transparency and Accountability
4. Citizen Information Boards, Management Information Systems and social audits (conducted by Gram Sabha's).

Evaluation of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA):

1. MGNREGA was notified in September 2005.
2. It guarantees at least 100 days of wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.
3. Increase in number of days of work: Under the scheme, state governments can ask for 50 days of work, in addition to the guaranteed 100 days, in case of exigencies arising from natural calamities.
4. Challenges in the wake of COVID-19. It recommended increasing the guaranteed days of work under the scheme from 100 days to 150 days.
5. **Revision of permissible works:** The the scheme requires frequent revision.
6. It include area-specific works under MGNREGA as per local needs. These may include, for instance, construction of bunds to stop land erosion during floods, and boundary works for agricultural fields to protect them from grazing animals.
7. Uniform wage rate: Wage rates notified under MGNREGA range from Rs 193 to Rs 318 in different states/UTs.
8. Mechanism for a unified wage rate across the country.
9. Increase in wages commensurate with inflation
10. Beneficiaries of MGNREGA generally belong to poor and marginalised sections of society.
11. Nominal wages under MGNREGA discourage beneficiaries and propel them to either seek more remunerative work or migrate to urban areas
12. This is reflected by the fact that while 755 lakh households were provided employment in 2020-21, only 72 lakh households completed 100 days of employment.
13. Consumer Price Index (CPI)-Rural as opposed to CPI-Agricultural Labour.
14. Delayed payment of wages: Wages under MGNREGA are paid by the central government
15. Beneficiaries become eligible for receiving wages within 15 days from the date of closure of muster rolls on completion of work
16. Inordinate delay in payment of wages to beneficiaries.
17. This is mainly due to failed payment transfer arising from: (i) inactive Aadhaar, and (ii) closed, blocked, or frozen bank account.
18. **Delay in compensation:** In case of delay in payment of wages under MGNREGA, beneficiaries are entitled to compensation at the rate of 0.05% of unpaid wages per day for the duration of delay

19. **Unemployment allowance:** Under MGNREGA, persons who apply for but are not provided with work within 15 days are entitled to a daily unemployment allowance. State governments determine the rate of this allowance.
 20. **Social audits:** Under MGNREGA, the Gram Sabha must conduct regular social audits of all projects taken up within the Gram Panchayat.
 21. That social audit reports are not publicly available. It recommended placing these reports in the public domain promptly after the audit exercise is over.
 22. **Appointment of ombudsperson:** Development to bring on board all state governments to comply with appointment of ombudsmen.
16. தொழில்முனைவு மற்றும் கண்டுபிடிப்புகளை மேம்படுத்துவதில் இந்தியாவின் முயற்சியினை விளக்குக.

Elucidate India's effort on promoting Entrepreneurship and Innovation.

Startup India:

1. Government of India promotes entrepreneurship by mentoring
2. Launch in January 2016
3. A 'Fund of Funds' has been created to help startups gain access to funding.

Make in India:

1. This scheme is designed to transform India into a global design and manufacturing hub,
2. launched in September 2014

Atal Innovation Mission (AIM):

1. AIM is the Government of India's endeavour to promote a culture of innovation and entrepreneurship,
2. It serves as a platform for promotion of world-class Innovation Hubs, Grand Challenges, start-up businesses and other self-employment activities, particularly in technology driven areas.

Support to Training and Employment Programme for Women (STEP):

1. STEP was launched by the Government of India's Ministry of Women and Child Development to train women who have access to formal skill training facilities, especially in rural India.
2. The Ministry of Skill Development and Entrepreneurship The programme imparts skills in several sectors such as agriculture, horticulture, food processing, handlooms, traditional crafts like embroidery, travel and tourism, hospitality, computer and IT services.

Jan Dhan-Aadhaar – Mobile (JAM):

1. technological intervention that enables direct transfer of subsidies to intended beneficiaries
2. Eliminates all intermediaries and leakages in the system, which has a potential impact on the lives of millions of Indian citizens.

Digital India:

1. The Digital India initiative has been launched to modernize the Indian economy to make all government services available electronically.
2. The initiative aims at transforming India into a digitally-empowered society and knowledge economy with universal access to goods and services.

Stand-Up India:

1. It was launched in 2015
2. Stand-Up India seeks to leverage institutional credit for the benefit of India's underprivileged
3. It aims at enabling economic participation of, women entrepreneurs, Scheduled Castes and Scheduled Tribes and share the benefit of Indian growth with the above mentioned categories

- Loans between Rs.10 lakhs to Rs.1 crore to set up Greenfield enterprises in manufacturing, services or the trading sector.

Trade related Entrepreneurship Assistance and Development (TREAD):

- India's underprivileged women, the TREAD programme enables credit availability to interested women through non-governmental organizations (NGOs).
- Women can receive support of registered NGOs in both accessing loan facilities
- Receiving counselling and training opportunities to kick-start proposed enterprises, in order to provide pathways for women to take up non-farm activities.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY):

- Initiative of the Ministry of Skill Development and Entrepreneurship (MSDE)
- This is a Skill Certification initiative which aims to train youth in industry-relevant skills to enhance employment opportunities for livelihood creation and employability.

National Skill Development Mission:

- This scheme was unveiled in July 2015.
- With a vision to build a 'Skilled India' it is designed to expedite decision-making across the sectors to provide skills at scale, without compromising on quality or speed.

Science for Equity Empowerment and Development (SEED):

- SEED aims to provide opportunities to motivated scientists and field level workers to undertake action-oriented, location specific projects for socio-economic gain, particularly in rural areas.
- SEED emphasizes equity in development, so that the benefits of technology accrue to a vast section of the population, particularly the disadvantaged.

17. இந்தியாவில் சுய உதவிக் குழுவின் நோக்கங்கள் மற்றும் செயல்பாடுகளை விமர்சன ரீதியாக ஆராய்க.

Critically examine the objectives and Functions of Self-help group in India.

- Self-Help Groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions
- An ideal SHG should have about 10 to 20 members.
- This is because if the group is bigger, it will be difficult for an individual to undertake equal participation in a large group
- The SHG shouldn't have more than one member from a particular family.
- This allows the inclusion of many families.
- It should also have either only men or only women because it is found that the mixed groups are not successful.

Objectives of SHG:

- To inculcate the savings and banking habits among members.
- To secure them from financial, technical and moral strengths.
- To enable the loan for productive purposes.
- To gain economic prosperity through loan/credit.
- To gain from collective wisdom in organising and managing their own finance and distributing the benefits among themselves.
- To sensitize women of target area for the need of SHG and its relevance in their empowerment.
- To create group feeling among women
- To enhance the confidence and capabilities of women.
- To develop collective decision making among women.

10. To encourage habit of saving among women and facilitate the accumulation of their own capital resource base.
 11. To motivate women taking up social responsibilities particularly related to women development
 12. It acts as the forum for members to provide space and support to each other
 13. SHGs are considered as one of the most significant tools to adopt participatory approach for the economic empowerment of women
 14. Meets regularly to discuss issues of interest to them and to look at solutions of commonly problems.
18. சுயதொழில் என்றால் என்ன? சுயதொழில் எப்படி இந்தியப் பொருளாதார வளர்ச்சியை ஊக்குவிக்கிறது.
What is self employment? How does the self employment promote the Indian economic growth?
1. A self-employed person is an independent contractor or a sole proprietor who reports self-employment income.
 2. Self-employed people work for themselves in a variety of trades, professions, and occupations rather than working for an employer.
 3. The Government of India has launched several flagship outcome-based skill training schemes like Pradhan Mantri Kaushal Vikas Yojana (PMKVY), Skill India.
 4. Start Up India, Stand Up India, Start-up Village Entrepreneurship Program (SVEP).
 5. Atal Innovation Mission is the emerging policy being implemented by NITI Aayog, policy think tank of Government of India.
 6. Despite rapid economic growth, the explosion of microcredit programs and self-help groups, and laudable efforts to increase women's political participation, gender disparities have remained deep and persistent in India.
 7. Skill development is more than ever before linked to entrepreneurship.
 8. Institutions and individuals promoting rural development now see entrepreneurship as a strategic development intervention that could accelerate the rural development process.
 9. Rural India continues to suffer from lack of employment and self-employment opportunities owing to its narrow economic base
 10. Career is a way of making one's livelihood. Self-employment is also a career because one may employ oneself in business or in service activities and earn one's livelihood.
 11. With growing unemployment and lack of adequate job opportunities, self-employment has become very significant.
 12. Advantage of Small Business
 13. Small-scale business has several advantages over large-scale business.
 14. It can be easily started, and requires small amount of capital investment.
 15. The self-employment involving activities on a small-scale is a good alternative to large scale business which has brought various evils like environmental pollution, development of slums, exploitation of workers, and so on.
 16. Preference over Wage Employment
 17. In self-employment there is no limit of earnings as is the case with wage employment.
 18. In self-employment one can use one's talent for own benefit. The decisions can be taken quickly and conveniently.
 19. All these factors act as strong motivators for self-employment to be preferred over wage employment.
 20. Developing the Spirit of Entrepreneurship

21. Entrepreneurship involves taking risks because the entrepreneur tries to innovate new products, new methods of production and marketing
 22. Self-employment, on the other hand, involves either no risk or very little risk.
 23. But, as soon as the self-employed person starts becoming innovative and takes steps to expand his business, he becomes an entrepreneur
 24. Self-employment becomes a launching pad for entrepreneurship.
 25. Promotion of Individualised Services
 26. Self-employment may also take the form of providing individualised services like tailoring, repair work, dispensing of medicines,
 27. Such services are helpful in providing better consumer satisfaction. These can be easily started and run by individuals.
 28. Reducing the Problem of Unemployment
 29. Self-employment provides opportunities of gainful occupation to those who otherwise remain unemployed. Thus it reduces the problem of unemployment.
 30. A boon to Under-privileged in Respect of Higher Education.
 31. Self-employment has been given high priority in government policies and programmes.
 32. A number of schemes have been initiated all over the country to encourage entrepreneurship and self-employment.
19. இந்தியாவில் உள்ள மற்ற மாநிலங்களை ஒப்பிடுகையில் தமிழகத்தில் வறுமை விகிதம் குறைவாக இருப்பதற்கான காரணங்களை வரிசைப்படுத்துக.

List out the reasons for the lower poverty rate in Tamil Nadu when compared to other states in India.

1. NITI Aayog has released the Multidimensional Poverty Index (MPI) report, which measures the “three equally weighted dimensions” of health, education and quality of life. Tamil Nadu (4.89 percent) is one of the states with the lowest poverty in the report (Bihar: 51.91 percent, Kerala: 0.71). percent)
2. All three reports of NITI Aayog have a common feature of implementing the Sustainable Development Goals (SDGs) of the Union Government Policy Think Tank. Tamil Nadu ranks first in Goal 1 – “Total Eradication of Poverty”.
3. Legacy of Justice party rule – free food scheme, allotment of land to marginalized people, free education etc.
4. Food security, poverty alleviation programs (like Anna's One Step Rice Scheme)
5. Tamil Nadu has been implementing a health insurance scheme (Prime Minister's Comprehensive Health Insurance Scheme) for more than 10 years.
6. The scheme has protected many vulnerable groups from adverse health events; If these are not protected, economically vulnerable people may be pushed back into poverty.
7. Despite relative poverty in rural areas and urban slums, the state is “free from extreme poverty”. This has been made possible by the universal distribution system.
8. Pursuance of universal PDS system rather than targeted PDS.
9. Implementation of Integrated Child Development Scheme (ICDS) to address malnutrition.
10. Free education and educational promotion schemes like free laptop, bicycle.
11. Skill Development Vocational Training - Employability - Less Poverty
12. Effective Implementation of Green Revolution - Food Security - Less Poverty
13. Effective implementation of LPG 1991 - Most industrialized state in India - Employment - Less

poverty.

14. Industrial promotion schemes.

15. The Self Help Group (SHG) movement in Tamil Nadu has been nurtured by TNCDW for the overall development of rural women through various capacity building activities to create bond and confidence among the people.

16. Swarnajayanti Gram Swaroskar Yojana (SGSY), a central government funded scheme launched in 1999 with a focus on SHGs to address rural poverty, can be effectively implemented for the economic upliftment of the rural poor.

17. TNSRLM facilitates access to livelihood interventions and access to financial and other services by reducing poverty by enabling poor households to engage in gainful self-employment and skilled wage employment.

20. குழந்தை தொழிலாளர்களான காரணங்கள், விளைவுகள் மற்றும் அதற்கு தீர்வு காணும் வழிமுறையை விளக்குக.

Explain the causes, effects and remedies for child labour.

Causes of Child Labor:

Poverty:

1. Poverty in India is 21.9%
2. Children's income is of great benefit to families living below the poverty line.

Large families and population growth:

1. Large families are found in rural India.
2. As the family income is very small, children go to work for family income at an early age.

Easily available workers:

1. Mechanization (m) aims to complete work faster due to new scientific techniques.
2. They employ child labor to get more profit with less investment.

Characteristics of Child Labor:

1. Child labor is underpaid
2. Can work longer hours
3. They will not form a union or go on strike
4. Children do not show resistance

Social Recognition:

1. There is no idea that child labor is wrong in the society.
2. Employers and parents think it is right.

Illiteracy –26%:

Illiterate parents are not aware of the need for proper physical (m) cognitive emotional development of a child.

Urbanization – 25% of population:

Child labor is being employed in multinational corporations (MNCs) in export industries especially in the garment industry through the urbanization process in developing countries.

Other Factors:

Low profitability (h) Lack of adequate remuneration for adult workers in small-scale family enterprise manufacturing industries.

Consequences of Child Labor Status:

1. Generation of child labor is known as theft of future national human resources.
2. Child labor is the worst form of corruption, based on future monetary losses.

3. HIV/AIDS, drug addiction, mental illness are common among child labourers.
4. Due to being a child laborer, there will be long term health problems.
5. Children's mind, education, physical development etc. will be affected.
6. Being workers in hazardous factory, their life becomes very short.
7. Their income at any rate is not reflected in the revenue of the country and is exploited.

Government Schemes to Address Child Labour:

Child Helpline Number – 1098:

1. This is a toll free phone number
2. Awareness (M) counseling is being given to ensure the well-being of children.

Child Gray Scheme – 6 laksh / 10 child subsidy:

1. It is a program that emphasizes child adoption
2. 6 lakh rupees as subsidy for 10 children was given by the government.

Budget for Kids:

Funds are earmarked separately for expenses to fulfill certain special needs of children.

Integrated Child Development Program – 1975:

To improve nutritional (m) health status of children aged 0 to 6 years.

National Child Labor Scheme – 1988:

1. The scheme is functioning under the Child Labor Policy of the country, 1987.
2. District Collector / District Magistrate has been given the responsibility to oversee the operation of the scheme.
3. NGOs will also participate.

21. ஊழல் என்றால் என்ன? அதற்கான காரணங்கள் மற்றும் ஒழிப்பு நடவடிக்கைகள் குறித்து விவரிக்க.

What is corruption? Explain about its causes and remedial measures.

Connivance, cheating, manipulation, extortion, favoritism are forms of corruption.

Causes of corruption:

- 1) Lack of regular regulations
- 2) Inaccessibility of government service to people in administration
- 3) Gap between people, civil servant
- 4) Delay in service delivery
- 5) Lack of transparency
- 6) Dishonesty
- 7) High tax rate
- 8) Greed
- 9) Indifference to public welfare
- 10) Socio-psychological acceptance of corruption
- 11) Lack of awareness
- 12) Defects in Anti-Corruption Act
- 13) Inflation
- 14) Red tape system
- 15) Apathy of the citizen
- 16) Administrative political center
- 17) Government employees are paid less compared to private sector.

18) Improper law enforcement.

Anti-Corruption Action:

- 1) Prevention of Corruption Act - 1988
- 2) Santhanam Group – 1963
- 3) Central Intelligence Agency – 1963
- 4) Central Corruption Vigilance Commission – 1964
- 5) Lokpal – 2014
- 6) Lok Ayukta
- 7) Central Information Commission - 2005
- 8) Right to Information Act - 2005
- 9) Demonetisation – November 8, 2016
- 10) Indian Penal Code – 1860
- 11) Prevention of Money Laundering Act - 2002

