

MANIDHANAHEYAM FREE IAS ACADEMY – TNPSC GROUP II & IIA  
TEST 2 – DECEMBER 2022 – ANSWER KEY



## Manidhanaeyam Free IAS Academy

(Run by Manidha Naeyam Charitable Trust)  
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### TEST - 2 – 18 Dec 2022 (Answer Key)

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.

தாள் – II / PAPER-II

பொது அறிவு

GENERAL STUDIES

அலகு - I / UNIT - I

பிரிவு - அ / SECTION - A

(15 6 = 90)

1. மனிதரில் ஒலி உருவாதல் முறையை விளக்குக.

**Explain the mechanism of sound formation in human.**

- ✓ 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.
- ✓ Muscle fibers called vocal cords are strung across the larynx.
- ✓ Vocal cords have narrow slits. Through this the air passes in and out.
- ✓ When we speak, air from the lungs passes through the trachea to the larynx.
- ✓ As air passes through the narrow slits the vocal cords vibrate and produce sound.
- ✓ Men's voice is heavier than women's because their vocal cords are longer and thicker.

2. மனித காதுகள் செயல்படும் விதத்தை விவரி.

**Explain how human ears work?**

- ✓ The ear is an important organ for hearing sound.
- ✓ We can hear sound through our ears.

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- ✓ The human ear inhales high-frequency vibrations in the air and analyzes them.
- ✓ Ears of aquatic animals are designed to receive high frequency vibrations of water.
- ✓ The outer part of the human ear is called the earlobe. It is designed to collect sound from the surroundings.
- ✓ These vibrations reach specialized cells in the inner ear.
- ✓ Vibrations from the inner ear are transmitted to the brain in the form of signals. The brain perceives these signals as sounds.

3. ஒளி அலைகள் பரவ உட்கம் தேவையா? நிரூபி.

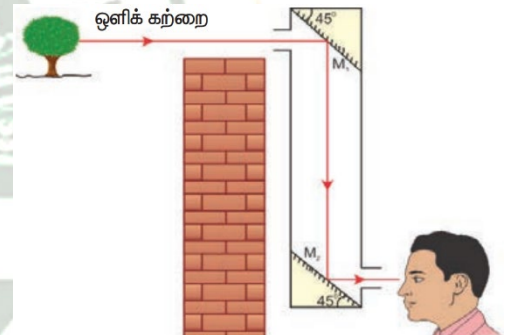
**Do light waves need a medium to spread? Justify.**

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

4. பெரிஸ்கோப் செயல்படும் விதத்தை பற்றி எழுதுக.

**Write about how periscope works.**

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



5. 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:**

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

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(ii) டிண்டால் விளைவு.

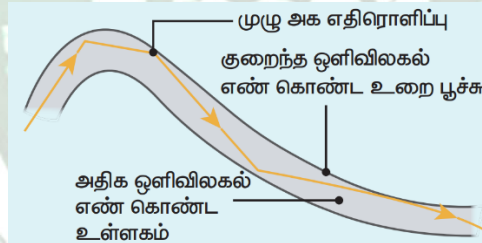
**Tyndall effect.**

- ✓ When a ray of sunlight enters through the window of a dusty room, the path of the ray is clearly visible to us.
- ✓ 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.
- ✓ The phenomenon of scattering of light rays by colloids in a colloidal solution is called Tyndall scattering or Tyndall effect.

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

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

- ✓ Based entirely on echo phenomenon, messages can be transmitted through optical fibers.
- ✓ 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.
- ✓ The optical message at a certain horizontal angle inside the surface where the fiber meets the cladding.
- ✓ 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.
- ✓ An endoscope is a bundle of light fibers. Doctors will inject it into the patient's body and examine the internal organs.
- ✓ 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.



7. ஏன் பாதரசம் அல்லது ஆல்கஹால் வெப்பநிலைமானிகளில் பயன்படுத்தப்படுகிறது?

**Why mercury or alcohol is used in thermometers?**

- ✓ Usually mercury or alcohol are the liquids used in thermometers.
- ✓ Because they remain in the liquid state despite changes in their temperatures.
- ✓ Even a small variation in temperature can cause a change in the volume of particles.
- ✓ We measure temperature by measuring this change in volume of liquids in a thermometer.

**Properties of Mercury:**

- ✓ It is opaque and glossy.
- ✓ It does not stick to the walls of the glass tube.

**Properties of Alcohol:**

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

8. வெப்ப குடுவை மற்றும் செயல்படும் விதத்தை விளக்குக.

**Explain the working principle of Thermoflask.**

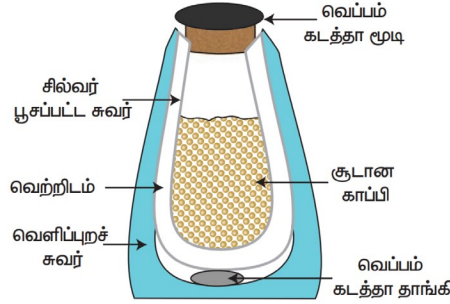
- ✓ A thermos flask (vacuum flask) is a non-conducting heat storage cell in which the thermal constant of the material inside it can be kept for a long time without increasing or decreasing

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the temperature of the surroundings.

- ✓ It keeps the temperature of the liquid kept constant for a long time and protects it from any change in its taste.

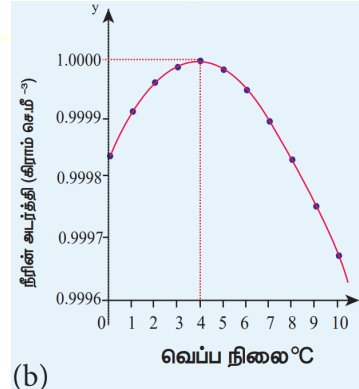
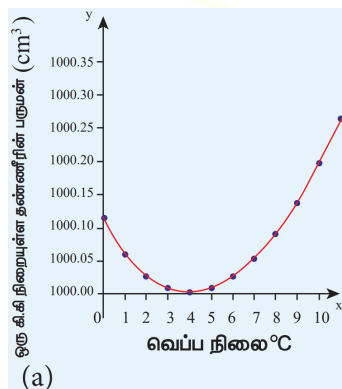


#### How a thermos flask works:

- ✓ A vacuum flask is a two-walled container. Its interior is made of silver. There is a void between the two walls.
  - ✓ The phenomena of convection and conduction help to keep the heat energy from dissipating.
  - ✓ Since there is little air between the walls, heat is not transferred from outside to inside and from inside to outside.
  - ✓ 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.
9. நீரின் முரண்பட்ட விரிவு பற்றி விளக்குக.

#### Explain the anomalous expansion of water.

- ✓ 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.
- ✓ As water cools from room temperature to 4°C, its density decreases.
- ✓ 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.
- ✓ In cold countries, the surface temperature of lakes is lower than its bottom temperature during winter.
- ✓ 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.
- ✓ Although the surface of lakes and ponds is frozen and covered with ice, the water below remains unfrozen and protects aquatic life.



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#### பிரிவு - ஆ / SECTION - B

10. புதுமை பெண் திட்டம் குறிப்பு வரைக.

**Write a note on Puthumai Penn scheme.**

Under the Moovalur Ramalinga Vratnam Ammaiyar 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.

- ✓ Prevention of child marriage.
- ✓ To financially assist female students who are unable to pursue higher education due to family situation and poverty.
- ✓ To reduce the dropout rate of girls and to encourage girls to pursue their higher education according to their choice.
- ✓ Encouraging female talent and participation in all fields through higher education.
- ✓ Through this scheme it is possible to create an intellectually egalitarian society by increasing employment opportunities for women and ensuring economic security.

11. மத்திய அரசின் பெண் விவசாயிகள் மேம்பாட்டிற்கான நல திட்டங்கள் யாவை?

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

- ✓ Mahila Kisan Sashaktikaran Paryojana, Deendayal Antyodaya Yojana – Sub-component of National Rural Livelihoods Movement.
- ✓ Aims to empower women by making systematic investments to improve their participation in agriculture-based livelihoods.
- ✓ Deendayal Antyodaya Yojana - National Rural Livelihood Initiative - A scheme to introduce women to latest technologies in agriculture and allied sectors.
- ✓ Trainings are provided to women farmers under the schemes of Ministry of Agriculture and Farmers Welfare and Ministry of Rural Development.
- ✓ 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.
- ✓ To introduce women to modern technologies in agriculture and allied sectors, trainings are provided to women farmers under the schemes.

12. இந்தியாவில் உள்ளாட்சி அரசு எதிர்கொள்ளும் சவால்களை விளக்கவும்.

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

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

13. SVAMITVA சிறு குறிப்பு தருக.

**Write a short on SVAMITVA Scheme.**

- ✓ 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.

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- ✓ Creation of accurate land records for rural planning.
- ✓ Fixation of property tax, which will either accrue directly to the GPs in the devolved states or be added to the state exchequer.
- ✓ Creation of survey infrastructure and GIS maps that can be used by any department for their application.
- ✓ Assist in preparation of better quality Gram Panchayat Development Plan (GPD) using GIS maps.
- ✓ To reduce disputes and legal cases related to property.
- ✓ About 6.62 lakh villages in the country will eventually be included in this scheme. The entire work will be spread over five years.

14. இந்தியாவில் குழந்தை தொழிலாளர் ஒழிப்பில் அரசு சாரா அமைப்புகளின் பங்களிப்பு குறித்து விளக்குக.

**Explain the contribution of NGOs in eradicating child labour in India.**

- ✓ One in ten children worldwide are child labourers. The number of children in child labor has fallen by 94 million since 2000.
- ✓ 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:**

- ✓ Kailash Satyarthi Children's Trust
- ✓ Hand in Hand India
- ✓ Global march against child labour
- ✓ UNICEF
- ✓ Smile Foundation
- ✓ Don Bosco Balfrafula
- ✓ Save the children

15. வறுமையை பெண்ணியமயமாக்கல் என்ற பதத்தினை விளக்குக.

**Explain the term Feminization of Poverty.**

- ✓ The concept of 'Feminization of poverty' was first mentioned by Diana Pearce in the late 1970s.
- ✓ '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.
- ✓ 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:**

- ✓ Low education
- ✓ Not getting married in due time
- ✓ Poor development policy
- ✓ Lack of decision making power among women
- ✓ Lack of information
- ✓ Sanitation and Insecurity
- ✓ Responsibilities associated with motherhood
- ✓ Professional inequality
- ✓ Morality and Inequality
- ✓ High prevalence of female headed households
- ✓ Inequality at home

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16. இந்தியாவில் திறந்தவெளிமலம் கழித்தல் இல்லாத நிலையை அடைவதற்கு தடையாக உள்ள முக்கிய சவால்கள் யாவை?

**What are the major challenges in achieving open defecation free status in India?**

- ✓ Conservative mindset
- ✓ Lack of awareness
- ✓ Corruption is rampant
- ✓ Poverty and illiteracy
- ✓ Practices like untouchability and ritualistic beliefs
- ✓ Presence of slums and unplanned settlements in urban areas

17. ஊரக சுகாதார உத்திகள் 2019-2029 – விவரிக்க.

**Rural Sanitation Strategy 2019-2029 - Explain.**

- ✓ 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.
- ✓ The strategy was prepared by DDWS in consultation with state governments and other stakeholders.
- ✓ 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.
- ✓ Sustain the health related behavior change achieved under Swachh Bharat Mission Gram (SBM-G).
- ✓ The strategy aims to ensure that focus is placed on increasing access to solid and liquid waste management in rural areas of the country.
- ✓ Public financing plays an important role in the ODF journey, but maintaining toilets and infrastructure requires innovative models of health financing.
- ✓ For the waste management component, funding should be mobilized from alternative funding sources including the Centre, States, Panchayat Raj Institutions (PRIs) and private funds.

18. குழந்தை தொழிலாளரின் மீதான கோவிட் -19 தாக்கம் பற்றி ஆராய்க.

**Examine the impact of Covid-19 on child labour.**

- ✓ The unprecedented economic impact of the Covid-19 pandemic is pushing children into exploitation and dangerous child labour.
- ✓ 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.
- ✓ Governments and donors should prioritize cash grants to help families maintain an adequate standard of living without resorting to child labour.
- ✓ 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.

அலகு – II

UNIT - II

(10 x 12 = 120)

1. குளிர்சாதனப் பெட்டி செயல்படும் விதத்தை விவரி.

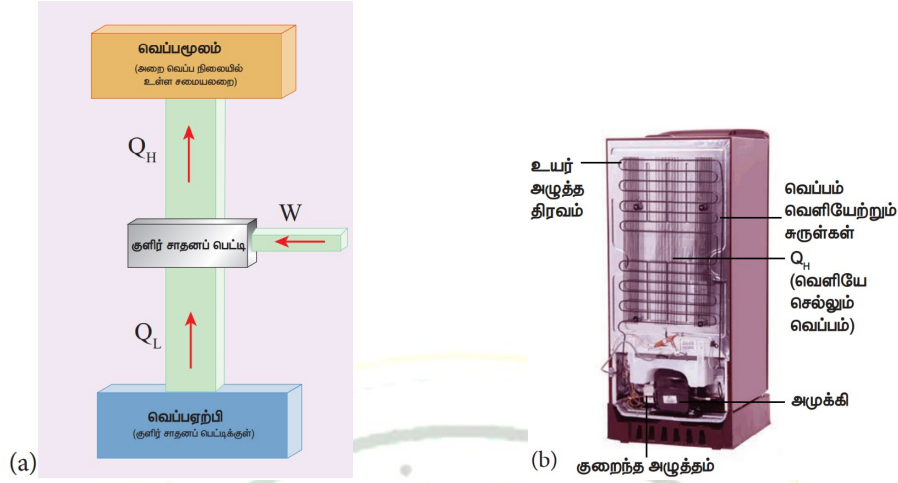
**Describe how a refrigerator works?**

- ✓ A refrigerator is a Carnot machine working in opposite direction.
- ✓ The active material receives heat QL from the cold material (heat sink) at low temperature TL.

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- ✓ 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.



- ✓ You can feel the warm air when you stand it next to the fridge. From the first law of thermodynamics

$$Q_L + W = Q_H$$

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

### Coefficient of performance (COP)

- ✓ 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.

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

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

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

But as we know

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

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

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

- ✓ The higher the COP, the better the refrigerator will run. A good refrigerator's COP is around 5 to 6.
- ✓ 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.
- ✓ 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.



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2. எதிரொலிகள் என்றால் என்ன? எதிரொலிக்கான நிகழ்வுகளை மற்றும் பயன்பாடுகளை குறிப்பிடுக.

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

**Applications of echo**

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

**Applications of Acoustic Echo:**

**Sound Echo Card:**

- ✓ 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.
- ✓ 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:**

- ✓ 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.
- ✓ 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:**

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

**Benefits of Acoustic Echo:**

**Heart rate monitor:** It works on the principle of multiple echo of sound.

- ✓ It consists of three parts:
- ✓ Placement on the heart
- ✓ Auricular part
- ✓ Rubber hose
- ✓ Placement on the heart: It is a small plate-shaped resonant membrane. It makes the sound very sensitive. And amplifies the perceived sound.
- ✓ **Rubber tube:** It connects the cardiac catheter to the auricular catheter. The membrane of the auricle carries the sensed sound to the auricle.
- ✓ **Reverberation:** A sound reflected by a wall or hill or any sound barrier surface and heard repeatedly is called reverberation.
- ✓ **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.

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3. தொலைநோக்கிகள் என்றால் என்ன? அதன் வகைகளை விவரி.

**What are telescopes? Describe its types.**

- ✓ Lunar eclipse cannot be seen clearly with naked eyes. Binoculars help us see distant objects clearly.
- ✓ Optical instruments used to see distant objects are called telescopes.
- ✓ In 1608, the first telescope was developed by Johan Libresche. Galileo built a telescope to observe the stars.
- ✓ 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:**

- ✓ Optical diffraction telescopes.
- ✓ Light reflection telescopes are classified into two types.
- ✓ 'Lens' are used in refracting telescopes. Examples of refracting telescopes are the Galileo telescope, the Kepler telescope, and achromatic refractors.
- ✓ 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**

- ✓ Astronomical telescopes
- ✓ 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:**

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

**Disadvantages:**

- ✓ Regular maintenance of telescopes.
- ✓ These cannot be easily transported elsewhere.

4. 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:**

- ✓ X-rays penetrate muscles more easily than bones.
- ✓ This results in an X-ray with deep shadowing of the bones and superficial shadowing of the muscles.
- ✓ 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:**

- ✓ X-rays are used to check for cracks in welded joints, automobile tires, tennis balls, and wood.

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- ✓ 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.

5. இந்தியாவில் சிறுபான்மையின மக்களுக்காக பல்வேறு நலத்திட்டங்களை விளக்குங்கள்.

#### Explain the various welfare schemes of minorities in India.

- ✓ Maulana Azad Fellowship Scheme (MANF) to provide five-year fellowships in the form of financial assistance to students belonging to six notified minority communities.
  - ✓ Bado Pardesh” – Interest Subsidy Scheme on Educational Loans for Overseas Studies for students belonging to minority communities.
  - ✓ 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.
  - ✓ 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).
  - ✓ Expose traditional art and craft skills including cooking skills of minorities through exhibition which will also provide them with a platform for business opportunity.
  - ✓ 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.
  - ✓ 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.
  - ✓ Maulana Azad Education Foundation (MAEF) – An organization created to formulate and implement educational programs for the benefit of educationally disadvantaged minorities.
  - ✓ 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.
  - ✓ To improve the socio-economic conditions of minority communities through affirmative action and inclusive development.
6. முதலமைச்சரின் பெண் குழந்தைகள் பாதுகாப்பு திட்டம் குறித்து விளக்கவும்.

#### Explain Chief Minister's Girls child protection scheme.

- ✓ 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.
- ✓ 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.
- ✓ 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.
- ✓ Fixed deposit in the name of girl children under this scheme is invested in “Tamil Nadu

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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:

- ✓ Ensuring girl child education up to at least class 10 and encouraging them to pursue higher education.
- ✓ Encouraging attitude of marrying after 18 years in girl child.
- ✓ Encouraging parents to adopt family planning with two female children.
- ✓ Ensuring the contribution of the family to develop the empowerment skills of the girl child.
- ✓ 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:

- ✓ 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.
- ✓ One of the parents must have undergone sterilization before the age of 40.
- ✓ At the time of application, the parents of the children must have been a continuous resident of Tamil Nadu for 10 years.
- ✓ 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.
- ✓ If there is more than one girl child during first and second births, they will get benefit under Scheme 2.

#### Beneficiaries of the scheme:

- ✓ 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.
- ✓ 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.
- ✓ 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.
- ✓ In the budget estimate for the year 2022-2023, a fund allocation of Rs.92.00 crore has been made.

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7. 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.**

- ✓ Disaster Management at Grassroots Level: Decentralization of powers and responsibilities to Panchayats.
- ✓ Enables flexible and resilient grassroots response during natural disasters.
- ✓ Effective and strong Panchayat Raj Institutions, functioning in harmony with the State Govt.
- ✓ Helps to deal with disaster through early warning systems.
- ✓ Ensuring better relief measures: Local bodies are closer to the people.
- ✓ Being well aware of the needs of the local people are in a better position to carry out relief work.
- ✓ It ensures complete transparency in the working and utilization of funds in every disaster situation.
- ✓ They can also be relied upon for day-to-day running of civic services, providing shelter and medical assistance to affected people.
- ✓ Spreading awareness and garnering cooperation: Local bodies have grassroots contact with people.
- ✓ And they will effectively help in spreading awareness and ensuring people's participation in fighting the crisis.
- ✓ They are also excellent channels for participation of NGOs and other organizations in rescue and relief operations.
- ✓ Organized local surveillance systems: Maintain strict vigilance in quarantine centers and monitor for symptoms in households.
- ✓ Panchayat Raj institutions will organize community-based monitoring systems involving village elders, youth and self-help groups (SHGs).

8. இந்தியாவில் நகர்ப்புற உள்ளாட்சிகள் எதிர்கொள்ளும் சவால்களைப் பற்றி விவாதித்து அதற்கான தீர்வுகளைப் பரிந்துரைக்கவும்.

**Discuss the challenges faced by urban local government in India and suggest remedies.**

**1. Approach of State Governments:**

- ✓ State governments have given only a small number of taxes to urban local bodies.
- ✓ Elections to urban local bodies have also been delayed citing many problems of the government. Eg: Tamil Nadu

**2. Politicization of Urban Local Government:**

- ✓ They are seen as mere platforms for political mobilization rather than effective tools for ensuring development.

**3. Distribution of Powers:**

- ✓ Their powers are being usurped by the growing number of special purpose agencies in the country.
- ✓ Meaningful devolution on the basis of functions, tax collection powers is yet to be achieved.

**4. 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.

**5. Improper maintenance of accounts:**

- ✓ The CAG reports on local governments pointed out several deficiencies in the preparation of

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municipal accounts related to budgeting, accuracy, updating and timely submission of accounts by urban local governments.

#### 6. Disadvantages of State Finance Commissions:

- ✓ Inefficient functioning of State Finance Commissions has hampered the ability of urban local bodies to mobilize financial resources.
- ✓ Recommendations of State Finance Commissions are mostly ad hoc and not based on sound public finance policies.

#### 7. 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.

#### 8. Existence of many bodies:

- ✓ At the state level, there is less coordination between bureaucracy-led agencies such as development authorities; They also have overlapping functions.
- ✓ This led to fragmented management and thus lack of coordination in finance and expenditure.

#### Procedures:

- ✓ Public-Private Partnership, Mumbai: “Gitanjali Industries” in Mumbai with Public-Private reference is an example to follow.
- ✓ Partnership is like privately owned, it works cooperatively with Greater Mumbai Corporation for recycling of dry waste.
- ✓ Traffic Information System, Bengaluru: The MapUnit Information System is developed to meet the needs of the growing population.
- ✓ Development of a network in the city, which is managed and controlled by technology.

9. இந்தியாவில் குழந்தை தொழிலாளர் முறையை தடுப்பதற்கான அரசியலமைப்பு நடவடிக்கைகளை பட்டியலிடுக.

#### List out the constitutional measures to prevent child labor in India.

##### • 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.

##### • 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.

##### • 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.

##### • 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.

##### • Verse 23:

- ✓ Prohibition of human trafficking and forced labour

##### • 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.

##### • 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.

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- **In Schedule-11 under Article 243B:**

- ✓ Section 17 – Education including primary and secondary schools
- ✓ Section 23 - Hygiene and health including hospitals, primary health centers and dispensaries.
- ✓ Article 25 – Empowers Gram Panchayat to promote women and child development.

- **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.

- **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.

10. இந்தியாவில் வறுமையை மதிப்பிடுவது ஏன் மிகவும் கடினமாக கருதப்படுகிறது?

**Why is it considered so difficult to assess poverty in India?**

- ✓ Irregular estimation
- ✓ Over population
- ✓ Migrant Peoples
- ✓ Errors in calculation method
- ✓ High population
- ✓ Lack of data
- ✓ Fake data
- ✓ Lack of access
- ✓ Data reduction
- ✓ Poor resource allocation
- ✓ Illiteracy
- ✓ Lack of Awareness

11. மனிதக் கழிவுகளை கையால் சுத்தம் செய்யும் வேலைக்கு எதிரான அரசியலமைப்பு சட்ட பாதுகாப்புகள் யாவை.

**What are the constitutional protections against manual scavenging of human waste?**

- ✓ Manual scavenging is the manual scavenging of human excreta from railway tracks, unsanitary latrines, open drains or cesspits.
- ✓ 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.
- ✓ According to Article 17. (Abolition of Untouchability) “Untouchability” is abolished and its practice in any form is prohibited.
- ✓ An offense punishable under any applicable law establishing untouchability.
- ✓ Article 21 of the Constitution: The fundamental rights guaranteed in Part III of the Constitution include the right to life with dignity.
- ✓ Article 23 of the Constitution: Prohibits forced labor.
- ✓ 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

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exploitation.

- ✓ Clause (n) and Clause (c) of Article 243P of the Constitution relating to a Municipality or Panchayat defines sanitation.

12. 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.
- ✓ **Absolute poverty:** Also known as extreme poverty or abject poverty. This includes lack of basic food, clean water, sanitation, shelter, education and information.
  - ✓ **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.
  - ✓ **Situational poverty:** A temporary type of poverty based on events such as environmental disaster, job loss and serious health problems.
  - ✓ **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.
  - ✓ **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.
  - ✓ **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:
    - ✓ Limited access to health and education.
    - ✓ Lack of housing and basic needs.
    - ✓ Environmental damage and unhealthy environment due to overcrowding.
    - ✓ Little or no social security mechanism.

அலகு - III

UNIT-III

(6 x 15 = 90)

1. டாப்ளர் விளைவு என்றால் என்ன? அதன் பயன்பாடுகள் யாவை?

**What is Doppler Effect? and what are its applications?**

- ✓ 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.
- ✓ The appearance change at this frequency was first discovered and explained by the Austrian mathematician and physicist Christian Doppler (1803 - 1853).
- ✓ 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.
- ✓ Moving the listener towards or away from a fixed sound source



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- ✓ Sound source moving towards or away from a stationary listener.
- ✓ Movement of sound source and listener towards or away from each other.
- ✓ Movement of the medium through which the sound propagates while the sound source and the listener are at rest.
- ✓ For simplicity of calculations we will assume that the sound propagation medium is at rest. Hence the velocity of the medium is vorticity.
- ✓ 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.
- ✓ 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

Condition	Sound source and listener position	Reference	Appearance frequency
1	The sound source and listener are on.	<ol style="list-style-type: none"> <li>The distance between the light source and the receiver decreases.</li> <li>The apparent frequency is greater than the true frequency.</li> </ol>	$n' = \left( \frac{v + v_L}{v - v_s} \right) n$
2	Moving towards each other.	<ol style="list-style-type: none"> <li>The distance between the sound source and the listener increases.</li> <li>The apparent frequency is lower than the true frequency.</li> <li><math>V_S</math> and <math>V_L</math> values will be in the opposite direction as stated in step 3.</li> </ol>	$n' = \left( \frac{v - v_L}{v + v_s} \right) n$
3	The sound source and listener are on.	<ol style="list-style-type: none"> <li>The apparent frequency depends on the speed of the sound and the direction of the listener.</li> <li><math>V_S</math> is the opposite of what was said in stage 2.</li> </ol>	$n' = \left( \frac{v - v_L}{v - v_s} \right) n$
4	They move one after the other. Follows the listener through sound.	<ol style="list-style-type: none"> <li>The apparent frequency depends on the sound source and the velocity of the listener.</li> <li><math>V_S</math> and <math>V_L</math> will be in the opposite direction as stated in step 3.</li> </ol>	$n' = \left( \frac{v + v_L}{v + v_s} \right) n$
5	The sound source and listener are on. They move one after the other.	<ol style="list-style-type: none"> <li>The distance between the sound source and the listener decreases.</li> <li>The apparent frequency is greater than the true-frequency.</li> </ol>	$n' = \left( \frac{v + v_L}{v} \right) n$

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		3. At stage 1, $V_s = 0$	
6	The listener follows the sound source.	1. The distance between the sound source and the listener increases. 2. The apparent frequency falls below the true frequency. 3. In stage 2, $V_s = 0$	$n' = \left( \frac{v - v_L}{v} \right) n$
7	At rest by sound.	1. The distance between the sound source and the listener decreases. 2. The apparent frequency is greater than the true frequency. 3. In stage 1, $V_L = 0$	$n' = \left( \frac{v}{v - v_s} \right) n$
8	The listener moves towards the sound source.	1. The distance between the sound source and the listener increases. 2. The apparent frequency is lower than the true frequency. 3. In stage 2, $V_L = 0$	$n' = \left( \frac{v}{v + v_s} \right) n$

- ✓ 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
- ✓ 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.
- ✓ When both the sound source (S) and the listener (L) are at rest.
- ✓ When the sound medium (S) and the listener (L) move at equal intervals.
- ✓ When sound medium (S) and listener (L) move perpendicular to each other.
- ✓ The sound source is located at the center of the circle and the listener moves along the circle.
- ✓ Applications of Doppler effect
- ✓ 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.
- ✓ Cow. 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.
- ✓ 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.
- ✓ 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.

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2. 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?**

- ✓ 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.
- ✓ 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.
- ✓ A non-thermal process can be performed using the following methods.
- ✓ 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.
- ✓ For example, a gas in an insulated cylinder compresses nonthermally or expands nonthermally.
- ✓ A non-heat transfer event occurs in a very short time so that heat cannot be transferred to the environment without any insulation.

**Examples:**

- ✓ When a tire explodes, the air inside the tire expands rapidly without time to transfer heat to the environment
- ✓ When a gas compresses or expands too rapidly at zero temperature, the gas cannot transfer heat to the environment.
- ✓ 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?**

- ✓ In summer we use earthen pot water for drinking. A clay pot lowers the temperature of the water poured into it.
- ✓ 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 +

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outside atmosphere) always increases if we consider it as a thermodynamic system.

3. ஒன்றிய அரசாங்கத்தின் ஜல் ஜீவன் திட்டத்தை பகுப்பாய்வு செய்க.

#### **Critically analyze the Jal Jeevan Scheme of Union Government.**

- ✓ Taking a cue from previous water supply projects, the Jal Jeevan Mission focuses on water service delivery rather than just providing water supply infrastructure.
- ✓ Under JJM, every household irrespective of its socio-economic status is assured of piped water supply.
- ✓ (JJM)-Jal Jeevan Mission is built on the principle of 'no one left behind' for the poor, needy and marginalized sections of the society.
- ✓ Ensures piped water supply to the unserved at their homes.
- ✓ 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.
- ✓ Also, piped water connection in every rural house gives dignity to the people.
- ✓ It reduces the urban-rural gap and makes 'life easier' in accessing safe water.
- ✓ 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.
- ✓ Rs.11,000 crore allocated to States/Union Territories in 2020-21.
- ✓ 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.
- ✓ 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).
- ✓ 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/PRIs.
- ✓ A financial assistance of Rs.1,42,084 crore will be provided for the next five years i.e. till 2025-26.
- ✓ This massive investment in rural areas across the country will accelerate economic activity and boost the rural economy. Creating new employment opportunities in villages.
- ✓ 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.
- ✓ To achieve this, strengthening of State Government Village Water and Sanitation Committee (VWSC)/ Working Committee, formulation of Village Action Plan for next five years.
- ✓ Support activities such as activation of State Agencies (ISAs) should be undertaken to deal with and support rural communities. , and create awareness among people.
- ✓ 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.

4. 74வது அரசியலமைப்பு திருத்தச் சட்டத்தை விரிவாக விளக்கவும்.

#### **Explain 74<sup>th</sup> Constitution Amendment Act in detail.**

##### **Objectives:**

- ✓ 74th Constitution Amendment Act
- ✓ This act gave constitutional status to municipalities. It has brought them under the reasonable provisions of the Constitution.
- ✓ In other words the State Governments have a constitutional obligation to implement the new municipal system as per the provisions of the Act.
- ✓ The objective of this Act is to revitalize and strengthen municipal governments so that they can

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function effectively as units of local government.

#### Constitutional Provisions:

- ✓ 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.
- ✓ The 74th Amendment gave uniform legislation to all municipalities in the country.

#### Key Features:

- ✓ Three types of municipalities
- ✓ 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 formed.

#### Composition:

- ✓ All members of a municipality are directly elected by the people of the municipal area.
- ✓ For this purpose each municipal area is divided into regional blocks known as wards.
- ✓ The State Legislature may provide for the method of electing the Chairperson of a municipality.

#### Reservation:

- ✓ In every municipality reservation is given to SC and ST in proportion to their population.
- ✓ Reservation of 1/3rd of the total number of seats is also given to women.
- ✓ The State Legislature is empowered to make any provision for reservation in the municipality at any stage in favor of backward classes.

#### Duration:

- ✓ Municipalities are given a five-year tenure at each level. However, it may be dissolved before the expiry of its term.
- ✓ 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:

- ✓ The powers and functions of Municipalities are conferred by the State Legislature.
- ✓ Municipalities prepare plans for economic development and social justice for the people of the municipality.
- ✓ It implements central and state government programs for the upliftment of people at grassroots level.
- ✓ Municipalities have power to improve employment facilities and undertake development activities in the area.

5. பெண்கள் மேம்பாட்டிற்காக தமிழக அரசு செயல்படுத்தும் திட்டங்களை விளக்குக.

#### Explain the schemes implemented by Tamil Nadu Government for the development of women.

- ✓ 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.
- ✓ Dharmambal Ammaiyar Memorial Widow Remarriage Assistance Scheme – To encourage widow remarriage and rehabilitate widows.

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- ✓ E.V.Ra Maniammayar 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.
  - ✓ Mother Teresa Memorial Marriage Assistance Scheme for Orphan Girls – To provide financial assistance for the marriage of orphan girls.
  - ✓ 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.
  - ✓ 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.
  - ✓ Sathyavani Muthu Ammayar 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.
  - ✓ Pension Scheme for Indigent Transgenders – To uplift the livelihood of poor and destitute transgenders above 40 years of age.
  - ✓ Sathya Ammayar Memorial Government Children's Homes - Providing education to destitute, abandoned and abandoned children through free food, clothing, shelter and medical facilities.
  - ✓ Chief Minister's Girl Child Protection Scheme.
    - Promotion of girl child education.
    - Elimination of female infanticide.
    - Encouraging preference for girl child.
    - Promotion of small family size.
    - To improve the welfare of girl child in poor families and uplift the status of girl child.
  - ✓ Child Adoption Program – Providing a family to orphaned, abandoned, and neglected children.
6. 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.**

- ✓ 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)
- ✓ 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”.
- ✓ Legacy of Justice party rule – free food scheme, allotment of land to marginalized people, free education etc.
- ✓ Food security, poverty alleviation programs (like Anna's One Step Rice Scheme)
- ✓ Tamil Nadu has been implementing a health insurance scheme (Prime Minister's Comprehensive Health Insurance Scheme) for more than 10 years.
- ✓ The scheme has protected many vulnerable groups from adverse health events; If these are not

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protected, economically vulnerable people may be pushed back into poverty.

- ✓ 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.
- ✓ Pursuance of universal PDS system rather than targeted PDS.
- ✓ Implementation of Integrated Child Development Scheme (ICDS) to address malnutrition.
- ✓ Free education and educational promotion schemes like free laptop, bicycle.
- ✓ Skill Development Vocational Training - Employability - Less Poverty
- ✓ Effective Implementation of Green Revolution - Food Security - Less Poverty
- ✓ Effective implementation of LPG 1991 - Most industrialized state in India - Employment - Less poverty.
- ✓ Industrial promotion schemes.
- ✓ 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.
- ✓ 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.
- ✓ 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.

7. 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.**

- ✓ 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.
- ✓ 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.
- ✓ 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.
- ✓ Elimination of the role of middlemen can be ensured by making arrangements like direct cash transfer or collaboration with NGOs.
- ✓ Strict action against local authorities employing manual scavengers: Launching of application and toll-free number for registering complaints.
- ✓ The National Crime Investigation Agency (NCRB) may track sewage treatment related deaths and related data in its report.
- ✓ 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.
- ✓ Individual or group insurance should be provided to manual scavengers and the installments should be paid by the local bodies concerned.
- ✓ National Safai Karamcharis Fund and Development Corporation (NSKFDC) can provide

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general financial assistance in cleanliness and training to hand scavengers.

- ✓ Government of India should plan adequately to facilitate investments in moving towards technology-based sanitation. Also, workers should be trained to operate the technology.
- ✓ Establish an awareness committee and a monetary mechanism.
- ✓ A specially trained Police Investigating Officer should be appointed.

8. குழந்தை தொழிலாளர்களான காரணங்கள், விளைவுகள் மற்றும் அதற்கு தீர்வு காணும் வழிமுறையை விளக்குக.  
**Explain the causes, effects and remedies for child labour.**

#### Causes of Child Labor:

##### Poverty:

- ✓ Poverty in India is 21.9%
- ✓ Children's income is of great benefit to families living below the poverty line.

##### Large families and population growth:

- ✓ Large families are found in rural India.
- ✓ As the family income is very small, children go to work for family income at an early age.

##### Easily available workers:

- ✓ Mechanization (m) aims to complete work faster due to new scientific techniques.
- ✓ They employ child labor to get more profit with less investment.

##### Characteristics of Child Labor:

- ✓ Child labor is underpaid
- ✓ Can work longer hours
- ✓ They will not form a union or go on strike
- ✓ Children do not show resistance

##### Social Recognition:

- ✓ There is no idea that child labor is wrong in the society.
- ✓ 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:

- ✓ Generation of child labor is known as theft of future national human resources.
- ✓ Child labor is the worst form of corruption, based on future monetary losses.
- ✓ HIV/AIDS, drug addiction, mental illness are common among child labourers.
- ✓ Due to being a child laborer, there will be long term health problems.
- ✓ Children's mind, education, physical development etc. will be affected.
- ✓ Being workers in hazardous factory, their life becomes very short.
- ✓ Their income at any rate is not reflected in the revenue of the country and is exploited.



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#### Government Schemes to Address Child Labour:

##### Child Helpline Number – 1098:

- ✓ This is a toll free phone number
- ✓ Awareness (M) counseling is being given to ensure the well-being of children.

##### Child Gray Scheme – 6 laksh / 10 child subsidy:

- ✓ It is a program that emphasizes child adoption
- ✓ 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:

- ✓ The scheme is functioning under the Child Labor Policy of the country, 1987.
- ✓ District Collector / District Magistrate has been given the responsibility to oversee the operation of the scheme.
- ✓ NGOs will also participate.

