

# Manidhanaeyam Free IAS Academy

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# **TEST - 7 - 22 Jan 2023 (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 கருத்தீல் கொள்ளவும் 3 மணி நேரத்தீற்குள் விடையை எழுதீ முடிக்க வேண்டும்.
- √ SCERT பாட புத்தகங்களுக்கு அதிக முக்கியத்துவம் கொடுக்கவும், தேவை ஏற்படின் பிற பாட புத்தகங்களையும் பார்க்கவும்.
- முதன்மை தோவு தொடர்பான TNPSC அறிவுறுத்தல்களை கருத்தில் கொள்ளவும்.

## தாள்**\_∏**

PAPER-II பொது அறிவு

#### **GENERAL STUDIES**

அலகு - I / UNIT - I

<u>பிரிவு – அ / SECTION – A</u>

 $(15 \times 6 = 90)$ 

#### 1. 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 nutruitional security
- 6. Alternative then introducing GM crops

#### 2. 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.
- ് വ്യാപാത്ത്വ പെന്നിയിയർ ഗളിപ്പ്പ്റ്റർ ക്രഗ്ര് ഖിഖനിർക.

## '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.

# 4. 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.

### 5. പல்வேறு 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.

# 6. 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.

## 7. '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.

#### 8. 'பேரிடர் அபாயத்தைக் குறைப்பதற்கான நடவடிக்கையின் செண்டாய் 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.
- 9. 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.

## <u>பிரிவு – ஆ / SECTION – B</u>

# 10. 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).

# 11. 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, biomedical waste etc.

### 12. 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 23<sup>rd</sup> 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. I OT TY
- 4. Technical Support and Capacity-building
- 5. Research and Knowledge Management
- 6. Advocacy and Partnerships

## 13. 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

## 14. தகவல் அறியும் உரிமை (திருத்த) 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".

# 15. 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.

# 16. 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
- 17. 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.

## 18. ஏதேனும் இரண்டிற்கு 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) தார்மீக 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.

### அலகு – II UNIT – II

(10 x 12 = 120)

#### 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
- 2. விலங்கு 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.

#### 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.
- பார்வினிசம் மற்றும் நீயோ பார்வினிசத்தீன் 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.
- '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
- 6. 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
  - al ATTA 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
- '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.

### 8. 'பேரிடர் மேலாண்மையில் மாவட்ட நீர்வாகம் 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 cochairperson.
- 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. 73<sup>rd</sup> and 74 th 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.
- 9. கல்வி உரிமைச் சப்பம், 2009 என்பது இந்தியாவில் தொடக்கக் கல்விக்கான ஒரு கருவியாகும்– கூர்ந்து 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 STsSocially 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 Schoolworking days Teacher-working hours.
  - 8. "No Detention Policy" removed under RTE (Amendment) Act, 2019.

# Main achievemnts 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)
- 10. 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.
- TILGO 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.

## 11. கையால் துப்புரவு செய்பவர்களின் வாழ்க்கையை மேம்படுத்த சஃபாய் கரம்சாரிகளுக்கான தேசிய ஆணையத்தீன் 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.
- 12. ഥന്റിയെ 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.

15

- 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 and 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 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.

## அலகு - III UNIT-III

 $(6 \times 15 = 90)$ 

1. '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.
- 2. மனித மரபணுத்தொகை திட்டம் பற்றிய விரிவான குறிப்பு எழுதுக. அதன் முக்கீய 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° 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).
- 10. Chromosome 1 has 2968 genes whereas chromosome 'Y' has 231 genes.

#### 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.
- 4. இந்தீயாவில் 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.

N.C.

- 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.
- 5. 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 comission(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.
- 6. 'தகவல் அறியும் உரிமைச் சட்டம் இந்தியாவில் நல்லாட்சியைக் 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-eco 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 democractic 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.
- 7. '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.

- 8. **ஏதேனும் மூன்றிற்கு விடை அளிக்க:** Attempt any three:
  - (i) 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 nonplastic material.

### Challenges:

- 1. Consumer awareness
- 2. Incompatibility
- 3. Large scale involvement

## (ii) சுற்றுச்சூழ<mark>ல்</mark> 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.

### (iii) இந்தீயாவில் நிலநடுக்க 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.

# (iv)PM CARES - 虎島.

# 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.