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**Module III- Environmental pollution**

**Part- A**

1. Classify air pollutants.
2. Suggest any four equipments to control air pollution.
3. Classify the following pollutants

Radon gas, CO, NO2, Photochemical smog, acid rain etc..

1. What are point and non-point resources?
2. Identify point and nonpoint resources from the following.

Sewage water, textile effluent, runoff etc.

1. Define the terms BOD and COD.
2. Marine pollution causes hypothermia. Justify.
3. What are the sources of radioactive pollution?. How are radioactive pollutants disposed?
4. What is cyclone and Tsunami?
5. What are landslides?
6. Mention the scale used to measure the earthquake or How is earthquake measured? What measures are to be taken to mitigate it?
7. What are greenhouse gases? List out four greenhouse gases.
8. Mention the reasons for causing global warming.
9. List out the sources of radioactive pollutants. How are they disposed?

12. Suggest four equipments to control air pollution.

13. Mention the different methods of disposal of municipal solid waste

14. How does Tsunami occur?

15. List any two causes for nuclear pollution.

16. Enlist any two ill-effects of fireworks.

17. List out the type of fire and fire extinguisher from the following. (Will be given)

Match the following

Flammable liquids and electrical equipments - water 5

Flammable liquids - Foam 2

Combustible materials - wet chemical 4

Cooking oils - Dry powder 1

All types of material except cooking oils - CO2 3

**Part-B**

1. Discuss the causes, effects and control measures of
2. Air pollution
3. Water pollution
4. Thermal pollution
5. Noise pollution
6. Marine pollution.
7. Explain the process of solid waste management with a flow charts and the three methods of disposal of the solid waste (incineration, landfill and composting). (OR) **In urban solid waste management, how will you dispose the following material and explain in detail the method of solid waste disposal.**

**1)glass and porcelain bits 2) rubbish and garbage 3) food wastage and compostable waste.**  **(Compulsory)**

1. Explain the process of sewage treatment in detail. Explain Activated sludge process and trickling process in detail. **(Compulsory)**
2. Describe the methods adopted by thermal power plants to prevent thermal pollution.
3. Explain the various disaster management in detail. (Read case study like Vardha etc.)

a. Cyclone b. Earthquake and tsunami c. Landslides d. Flood.

**Example:** **Name the cyclone which hit Nagapattinam in November 2018, hit Chennai in December 2022.**

**Enumerate its effects and suggest the few remedies to mitigate it.**

**Module - IV-Human Population & the Environment**

**PART – A**

1. **What is population explosion?**

Population explosion:

* The enormous increase in population, due to low death rate (Mortality) and high birth rate (Natality)
* The human population is not increasing at a uniform rate in all parts of the world.

1. **Define population density**

Population density:

It is expressed as the number of individuals of the population per unit area or per unit volume.

1. **Give the importance of value education.**

Objectives (or) importance :

1. To create attitudes and improvement towards sustainable lifestyle.
2. To increase awareness about our national history, our cultural heritage, constitutional rights, national integration and environment.
3. To know about various living and non-living organisms and their interaction with environment
4. **Define doubling time.**

Doubling Time: It is the time required for a population to double its size at a constant annual rate. It is calculated as follows

Td (doubling time) = 70/r

r=annual growth rate.

If a nation has 2% annual growth, its population will double in next 35 years.

1. **Mention the objectives of family planning program.**

Objectives (or) factors influencing family size:

1. Reduce infant mortality rate to below 30 per 1000 infants.
2. Achieve 100% registration of births, deaths, marriage and pregnancy.
3. Enable to improve women’s health, education, employment.
4. Constrain the spread of AIDS/HIV.
5. Making school education upto age 14 free and compulsory.
6. **What is meant by Nimby syndrome?**

* NIMBY means Not In My Back Yard
* It describes the opposition of residents to the nearby location of something they consider undesirable, even if it is clearly a benefit for many.

Ex: an incinerator, an ethanol plant, a nuclear power plant, a prison.

* An airport benefits a city economically, but no-one wants it near them because of the noise pollution and traffic it generates.

1. **What are HIV and AIDS?**

HIV - Human Immuno Deficiency Virus

It is a virus.

AIDS – Acquired Immuno Deficiency Syndrome

It is a disease.

1. **Define immigration and emigration.**

Immigration:

It denotes the arrival of individuals from neighbouring population.

Emigration:

It denotes the dispersal of individuals from the original population to new areas.

9. Name any four airborne and waterborne diseases.

10. What are endocrine disrupting chemicals? Give an example.

11. List out the different schemes of family welfare programme.

12. List out any two objectives of wild life conservation act and forest conservation act.

**Part-B**

1. Explain the variation of population among nations with graph.

2. Define population explosion and explain the factors influencing it and its effects.

3. Write a note on human rights, value education and endocrine disrupting chemicals..

4.Define sustainable development. Explain the approaches to attain sustainable development.

5. Explain the following acts (i) Air act (ii) water act (iii) environment protection act (iv) wild life conservation act and forest conservation act.