UNIT – 2

ENVIRONMENTAL POLLUTION

2-MARKS

1. **Define Environmental Pollution.**

   Environmental Pollution is defined as any undesirable change in the physical, chemical, or biological characteristics of any component of the environment (air,water,soil)which can cause harmful effects on various forms of property.

2. **What do you mean by indoor air pollution?**

   Houses in the under-developed & developing countries use fuels like wood kerosene in their kitchens & incomplete combustion produces toxic gas like CO. The most important indoor radioactive material is radon gas that can be emitted from building materials like bricks, concrete etc. which are derived from soil containing radium. This is called indoor air pollution.

3. **What are the effects of various air pollutants on human health?Give any 4 steps to control air pollution.**
   a. Siting of Industries after proper EIA (Environmental Impact Assessment) studies.
   b. Using low sulphur coal in industries
   c. Using mass transport system
   d. Planting more trees

4. **What is the effect of air pollution on plant life?**

   Air pollutants affect plants by entering through stomata destroy chlorophyll and affect photosynthesis. Damage to leaf structure causes necrosis (dead areas of leaf), chlorosis (loss or reduction of chlorophyll causing yellowing of leaf), epinasty (downward curling of leaf), abscission (dropping of leaves).

5. **Define SPL.**

   The noise measurements are expressed as Sound Pressure Level (SPL) which is the logarithmic ratio of the sound pressure to a reference pressure. It is expressed in decibels. The international reference pressure is 2 x 10-5 Pa which is the average threshold of hearing for a healthy ear.

6. **Define water pollution & give the sources of water pollution.**

   Water pollution can be defined as alteration in physical, chemical or biological characteristics of water making it unsuitable for designated use in its natural state.
   There are 2 sources of water pollution. They are point sources – specific sites near water which directly discharge effluents into them & non point sources – sources are scattered and individually collect pollute water.

7. **What do you mean by DO & BOD?**
   Dissolved Oxygen (DO) is the amount of O2 dissolved in a given quantity of water at a particular temperature & atmospheric pressure. Biological Oxygen Demand (BOD) is defined as the amount of DO required to aerobically decompose biodegradable organic matter over a period of 5 days at 20○C.

8. **Explain thermal pollution.**

   Thermal pollution can be defined as the presence of waste heat in the water which can cause undesirable changes in the environment.

9. **What are the effects of thermal pollution?**

   a. The solubility of O**2** is decreased at high temperature.
   b. Toxicity of pesticides increases with increase in temperature
   c. Discharge of heated water can even kill young fishes.
   d. Fish migration is affected.

10. **How cooling ponds are used to reduce the thermal pollution?**

    Water from condensers is stored in ponds where natural evaporation cools the water which can then be recirculated or discharged in nearby water body.

11. **What are the sources of marine pollution?**
    The sources here are
    Rivers – bring pollutants from their drainage basins
    Coastline settlements in the form of hotels,industries.
    Oil drilling & shipment
    Radioactive disposal into deep sea

12. **What do you mean by ballast water & what is the effect of it in marine ecosystem?**

    After delivering oil through sea-route, earlier empty tankers used to be filled with water called ballast water to maintain balance. The ballast water containing residual oil from tankers was released into sea on completion of return journey. Oil in sea water spread over a large area & affects sensitive flora & fauna.

13. **What are the effects of radioactive waste in soil pollution?**

    Radioactive waste accumulates in food chain that leads to bioaccumulation & biomagnification. Radioisotopes which attach with the clay become a source of radiations in the environment. They replace essential elements in the body.

14. **What are the damages caused by the nuclear radiations?**

Genetic damages – The damage is caused by radiations, which induce mutations in DNA. The damage is often seen in the offsprings and may be transmitted upto several generations.
Somatic damage – This includes burns, miscarriages, eye cataract, bone cancer etc

15. **How to manage hazardous waste?**

a. Dispose the waste as early as possible
b. Prevent illegal, international traffic in hazardous waste
c. Strengthening the institutional capacities in hazardous waste management
d. Promoting the prevention and minimization of using hazardous waste

16. **What is Photochemical Smog?**

A photochemical reaction is any reaction activated by light. Air pollution known as photochemical smog is a mixture of more than 100 primary and secondary pollutants formed under the influence of sunlight. Its formation begins inside automobile engines and the boilers in coal-burning power and industrial plants.

Health Effects: Breathing problems, cough, eye, nose and throat irritation, heart ailments, reduces resistance to colds and pneumonia.
Environmental effects: Ozone can cause damage to plants and trees, Smog can affect visibility

17. **Define the term Noise Pollution.**

Noise pollution is the disturbing or excessive noise that may harm the activity or balance of human or animal life. The source of most outdoor noise worldwide is mainly caused by machines and transportation systems, motor vehicles, aircraft, and trains.

18. What are all the common pollutants of air?

a. Ozone
b. Suspended particulate matter.
c. Carbon Oxides
d. Nitrogen Oxides
e. Lead

19. What are all the systems used for controlling the air pollution?

a. Cyclone separator
b. Bag house filter
c. Electrostatic precipitator
d. Wet Scrubber

20. Give any 4 Standards for Drinking Water.

a. Colourless and Odourless.
b. Turbidity of the water must be less than 20 ppm.
c. Water must be free from pathogenic bacteria and viruses.
d. Water must free from poisons materials like arsenic and lead.