

1. What are the various constituents of domestic sewage? Discuss the effects of sewage discharge on a river.

Ans. Domestic sewage constituents are organic waste and effluents of various industries. Animal, excrete discharged into fields or dumped in pits reaches H_2O by rains off and leaching, particularly during rainy seasons. The organic matter in H_2O provides nutrients for decomposer, namely, bacteria, fungi.

Effect of sewage discharge on river:

1. Eutrophication.
 2. Growth of pathogenic bacteria.
 3. aging of river where slit and decaying matters start accumulating and filling river.
 4. Increase in BOD.
 5. Destruction of flora and fauna of that river.
2. List all the wastes that you generate, at home, school or during your trips to other places, could you very easily reduce? Which would be difficult or rather impossible to reduce?

Ans. Plastic containers, paper, electronic goods, left over food, food package, disposable glasses, cup plates, polythenes, excreta, soap and detergent waste. Out of these, polythene and plastic material are hard to dispose off as they are non-biodegradable and they can be recycled back.

3. Discuss the causes and effects of global warming. What measures need to be taken to control global warming?

Ans. Increase in atmospheric concentration of greenhouse gases has resulted in rise of atmospheric temperature by $0.6^\circ C$ (global warming) in the 20th century. This has been confirmed by intergovernmental panel on climatic change (IPCC) in its reports of 1991 and 1992. This predictable change in near future may affect the weather and climate, sea level, range of species distribution, food production as well as fisheries resources in the oceans.

Causes:

- (i) Increase in concentration of greenhouse gases.
- (ii) Increase of automobile and use of fossil fuel.
- (iii) Deforestation and change in land use.
- (iv) CFC and aerosol emission from refrigerator and aeroplane.
- (v) Increased particulate matter in lower atmosphere.

Effect:

- (i) CO_2 fertilisation effect

- (ii) Many species of trees, being sensitive to temperature stress, will die with sudden rise in temperature stress, will die with sudden rise in temperature and their place will be taken over by scrub vegetation.
- (iii) Loss of biodiversity,
- (iv) Greenhouse effect rise in sea level,

Beneficial effects of global warming in all probabilities will be overshadowed by the harmful effect of decline in world's crop productivity due to projected global warming.

4. Match the items given in column A and B:

Column A	Column B
(a) Catalytic converter	(i) Particulate matter
(b) Electrostatic precipitator	(ii) Carbon monoxide and nitrogen oxides
(c) Earmuffs	(iii) High noise level
(d) Landfills	(iv) Solid wastes to be taken to control global warming

Ans. (a)-(i), (b)-(ii), (c)-(iii), (d)-(iv).

5. Write critical notes on the following:

- (a) Eutrophication
- (b) Biological magnification
- (c) Groundwater depletion and ways for its replenishment

Ans. (a) **Eutrophication:**

1. Natural aging of lake by biological environment of its water.
2. Leads to less of biodiversity.
3. Causes chemical accumulation in food chain.
4. Causes aging of water body.

(b) **Biological magnification:** Increase in concentration of toxicant at successive trophic levels. This happens because a toxic substance accumulated by an organism cannot be metabolised or excreted, and is thus passed onto next trophic level.

(c) **Ground water depletion and replacement:**

- ❖ By leaching/rain off, water pollution, effluents for various industry, discharge of sewage into water table.
- ❖ **Replenishment** Growing water *Hyacinth* indicates overloading of water body with fertilisers, avoiding overuse of fertilisers and pesticides.

6. Why ozone hole forms over Antarctica? How will enhanced ultraviolet radiation affect us?

Ans. (1) Due to use of CFC and aerosol.
(2) Causing global warming, greenhouse effect, increase in sea level, fear of drowning of coastal areas.

7. Discuss the role of women and communities in protection and conservation of forests.

Ans. (a) Chipko movement (b) Reforestation
(c) Amrita Bishnoi Wildlife protection project.

8. What measures, as an individual, you would take to reduce environmental pollution?

Ans. (a) Reducing use of CFC
(b) Disposing off waste safely
(c) Reducing use of polythene
(d) Not disposing off waste in water bodies
(e) Making automobiles pollution free.

9. Discuss briefly the following:

(a) Radioactive wastes (b) Defunct ships and e-wastes
(c) Municipal solid wastes

Ans. (a) **Radioactive waste:** Generated by nuclear reactor, nuclear fallout, man-made refining and mining of platinum and thorium, natural radioactive waste, release of radiation in radiation therapy.

(b) **e-waste:** Electronic waste comprised of irreparable computer and other electronic goods, generated by developing countries and require **recycling**.

(c) **Municipal solid waste:** Refer Text.

10. What initiatives were taken for reducing vehicular air pollution in Delhi? Has air quality improved in Delhi?

Ans. (1) Introduction of CNG
(2) Pollution control and enforcement
(3) Introduction of green zones
(4) Impanalment of polluting vehicle
(5) Replacement of old vehicle with new.

11. Discuss briefly the following:

- (a) Greenhouse gases
- (b) Catalytic converter
- (c) Ultraviolet B

- Ans.**
- (a) **Greenhouse gases:** CO_2 , CH_4 , N_2O and CFC, cause greenhouse effect, cause of ozone depletion.
 - (b) **Catalytic converter:** To reduce emission of poisonous gases. It is made of platinum, palladium and rhodium and is used as catalyst. It converts unburnt hydrocarbons into CO_2 , H_2O , $\text{CO} \rightarrow \text{CO}_2$, CH_4 , N_2 gas.
 - (c) **Ultraviolet:** Causes skin cancer, reduce rate of photosynthesis in phytoplanktons, reduces diversity of aquatic ecosystem.

STUDY
mate 

helps excel in boards