

Bot PG 4th Semester

PAPER-XVI (ENVIRONMENTAL BIOTECHNOLOGY-I)

UNIT 1

SHORT Questions/ Short Notes

- 1, Green house effect leads to global warming. Which substances are responsible for green house effect?**
- 2 Acid rain is known to contain some acids. Name these acids and where from they come in rain?**
- 3 Ozone is a toxic gas and is a strong oxidising agent even then its presence in the stratosphere is very important. Explain what would happen if ozone from this region is completely removed?**
- 4. green house gases**
- 5 On the basis of chemical reactions involved, explain how do chlorofluorocarbons cause thinning of ozone layer in stratosphere.**
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- 7. The acids present in acid rain are _____. (i) Peroxyacetylnitrate (ii) H_2CO_3 16-04-2018 179 Environmental Chemistry (iii) HNO_3 (iv) H_2SO_4**
- 8 The gaseous envelope around the earth is known as atmosphere. The lowest layer of this is extended upto 10 km from sea level, this layer is _____. (i) Stratosphere (ii) Troposphere (iii) Mesosphere (iv) Hydrosphere**
- 9 Dinitrogen and dioxygen are main constituents of air but these do not react with each other to form oxides of nitrogen because _____. (i) the reaction is endothermic and requires very high temperature. (ii) the reaction can be initiated only in presence of a catalyst. (iii) oxides of nitrogen are unstable. (iv) N_2 and O_2 are unreactive.**
- 10 What are biodegradable and non-biodegradable pollutants?**
- 11. composition of air**
- 12. major regions of atmosphere**
- 13. photochemical smog**
- 14. acid rain**

15. ozone depletion

16. Formation of London smog takes place in

- a. winter during day time**
- b. summer during day time**
- c. summer during morning time**
- d. winter during morning time**

17. In a coal-fired power plant electrostatic precipitators are installed to control the emission of

- a. SO₂**
- b. NO₂**
- c. SPM**
- d. CO**

LONG QUESTIONS

1 .Green plants use carbon dioxide for photosynthesis and return oxygen to the atmosphere, even then carbon dioxide is considered to be responsible for green house effect. Explain why?

2. Explain how does green house effect cause global warming.

3 Explain point and non point sources of air pollution. What are the primary and secondary air pollutants? Give example.

4 Explain four major air pollutants and their consequences. Discuss the measure used for controlling air pollution.

5 What is ozone hole? What are the causes of ozone hole formation? Discuss the effects of ozone layer depletion and its remedial measures.

6. Discuss the effects of man-made climatic changes like- Acid rain, Greenhouse effect and Global Warming.

7. Describe the causes , effects and controlling measures of air pollution.

UNIT II

SHORT Questions/ Short notes

1 What are the environmental remediation processes that can be employed to curb the negative effects of soil pollution?

2 List some examples of the contaminants that pollute soils

3 What are the key causes of soil pollution?

4 What are the Processes that Cause Soil Pollution?

5 Explain reactor and non reactor composting

6 soil profile

7 soil structure

8. aerobic and anaerobic composting

9. what is biogas generation?

10. vermiculture

11. solid waste reuse

12. What is the most expensive component of solid waste handling? a. Collection b. Storage c. Treatment d. Separation

13 What is the process flow in a integrated solid waste management system?

a. Generation-Source separation- facility separation-collection- Transfer and transport-Landfill

b. Generation-Source separation-collection- Transfer and transport -facility separation-Landfill

c. Generation-Source separation-collection-facility separation-Transfer and transport-Landfill

d. Generation-Source separation-collection- Landfill -facility separationTransfer and transport

14 What Is Aerobic Composting?

15. What Is A Sanitary Landfill?

16. What Are The Different Types Of Waste?

17. Land degradation

LONG QUESTIONS

- 1 Describe in brief the concept of Solid Waste Management with the basic problem involved. Distinguish between the incineration and combustion method of solid waste disposal.**
- 2 Describe how physical composition of soil influences the magnitude and diversity of the microbial flora**
- 3. Describe different solid waste sources and their composition**
- 4. discuss various soil conservation methods**
- 5. Discuss various causes of soil pollution and its control**
- 6 What are the causes of soil pollution ? How do you prevent soil pollution?**
- 7 What is soil erosion? name the main factors causing soil erosion.**

UNIT III

SHORT Questions/ Short Notes

- 1. What Are The Rules And Regulations Guiding Waste Water Management In India?**
- 2. What Are The Common Methods Of Waste Water Disposal?**
- 3 Dissolved oxygen in water is very important for aquatic life. What processes are responsible for the reduction of dissolved oxygen in water?**

- 4 The quantity of DDT at each trophic level in the food chain**
 - a. decreases**
 - b. remains the same**

- c. increases
- d. changes

5 Brewery and sugar factory waste alter the quality of a water body by increasing

- a. temperature
- b. turbidity
- c. pH
- d. COD and BOD

6. BOD

7. COD

8. Eutrophication

9. TDS

10. Sources of water pollution

11. surface water resources

12. waste water as resources

LONG QUESTIONS

1 What do you mean by water pollution? Suggest various remedial and control measures to minimize water pollution.

2. Discuss waste water collection and treatment process

3. Discuss the surface water resources and their degradation

4. Describe the cause , effect & control measures of Water pollution