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M – 1500

Reg. No. : .....

Name : .....

**Fifth Semester B.Sc. Degree Examination, December 2021**

**First Degree Programme Under CBCSS**

**Chemistry**

**CH 1551.3 — ENVIRONMENTAL CHEMISTRY**

**(2018 and 2019 Admission)**

Time : 3 Hours

Max. Marks : 80

**SECTION – A**

(Answer **all** questions. **Each** question carries **1** mark)

1. In the lower layers of atmosphere, what range of wavelengths of light is predominant?
2. What are the reasons for acid rain?
3. Mention the side effects of phosphate containing fertilisers in water bodies.
4. Which gas is mainly produced due to incomplete burning of wood?
5. Give an example for secondary air pollutant.
6. Which is the main source of arsenic pollution in water?
7. What are the sources of dissolved oxygen in water?
8. Which layer of the atmosphere is responsible for aurora formation?

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9. By international convention, which line marks the outermost boundary of the Earth's atmosphere?
10. Name any two synthetic resins used for water treatment.

**(10 × 1 = 10 Marks)**

### SECTION – B

(Answer any **eight** questions. **Each** question carries **2** marks)

11. How is ozone produced in stratosphere?
12. What are photochemical oxidants?
13. What is reverse osmosis?
14. What are biodegradable and non-biodegradable pollutants?
15. Briefly discuss about alternative refrigerants.
16. What is SPM?
17. How dioxins affect the air quality parameters?
18. How CFCs affect the ozone layer?
19. Why does water covered with excessive algal growth become polluted?
20. Explain the treatment of sewage water.
21. What are non-persistent air pollutants?
22. Define environment and ecosystem.
23. Briefly discuss about plastic waste handling rules?
24. How we can control SO<sub>x</sub> pollution?

25. Discuss briefly about photochemical smog.
26. What is ozone depletion?

**(8 × 2 = 16 Marks)**

SECTION – C

(Answer any **six** questions. **Each** question carries **4** marks)

27. What are the importances of ozone layer?
28. Discuss about different sampling techniques used for the collection of water samples.
29. Write a note on Montreal protocol.
30. Discuss about different acts for the prevention and control of air pollution.
31. Write a note on thermal pollution.
32. Briefly describe about treatment of industrial waste.
33. Write a note on biosphere.
34. Discuss the chemistry of soil environment.
35. Briefly discuss important current environment problems.
36. Discuss about different health issues associated with bad quality air
37. Write a note on Electrodialysis.
38. Write a note on green house effect.

**(6 × 4 = 24 Marks)**

SECTION – D

(Answer any **two** questions. **Each** question carries **15** marks)

39. Describe briefly about different types of air pollutants.
40. Discuss the structure and composition of atmosphere.

41. What is air pollution? What are the causes for air pollution? What are the prevention measures for air pollution?
42. Discuss about the wild life protection act and forest conservation act.
43. Write a note on the following environmental disasters:
- (a) Seveso disaster chemical plant explosion
  - (b) Bhopal disaster
  - (c) Chernobyl incident
44. (a) What are reasons for Minamata and Itaiitai diseases?
- (b) Write a note on radioactive pollution.

**(2 × 15 = 30 Marks)**

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