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**Reg. No. :** .....

**Name :** .....

**Fourth Semester M.Sc. Degree Examination, July 2024**

**Zoology**

**Special Subject – Environmental Physiology**

**ZO 241 : POLLUTION BIOLOGY AND ENVIRONMENTAL PHYSIOLOGY**

**(2013 Admission Onwards)**

Time : 3 Hours

Max. Marks : 75

**SECTION – A**

- I. Write very brief notes on any **ten** of the following. Each question carries **2** marks.
1. Biological effects of Ionizing radiations.
  2. Activated sludge process.
  3. Mimicry.
  4. Sources and effects of Biocides.
  5. Biochemical Oxygen Demand.
  6. Sources of Nuclear radiation.
  7. Role of Sodium pump  $\text{Na}^+$  and  $\text{H}^+$  ATPase in relation to salinity adaptations.
  8. Functions of electric organs.
  9. Air pollution episodes.

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10. Sonic boom.
11. Effects of air pollutants on human health.
12. Temperature adaptation.
13. Eutrophication.
14. Tertiary treatment systems in water pollution abatement technology.
15. Environmental impacts of mining waste.

**(10 × 2 = 20 Marks)**

SECTION – B

II. Write short notes on any **six** of the following. Each question carries **4** marks.

16. Ways to reduce noise pollution.
17. Photochemical smog.
18. Echolocation.
19. Environmental impact of pesticides.
20. Strategies for controlling solid waste pollution.
21. Design and working of bag filters.
22. Radioactive pollutants.
23. Biochemical mechanisms of animals to high altitudes.
24. Bio magnification.
25. Agricultural waste.

**(6 × 4 = 24 Marks)**



SECTION – C

III. Write short essays on any **three** of the following. Each question carries **7** marks.

- 26. Nuclear waste disposal.
- 27. Implications of global warming on animals.
- 28. Heavy metals and industrial effluents.
- 29. Osmoregulation in aquatic animals.
- 30. Chief air pollutants, their sources and effects.

**(3 × 7 = 21 Marks)**

SECTION – D

IV. Write an essay on any **one** of the following. Each question carries **10** marks.

- 31. Bio-luminescence.
- 32. Industrial pollution.

**(1 × 10 = 10 Marks)**

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