

Time : 2-30 Hours]

[Max. Marks : 70

Instructions: All Questions carry equal marks
Attempt all Questions

Q.1 Explain the concept and interdisciplinary nature of Environmental Toxicology. Discuss in detail the scope and recent advances in this field. [14]

OR

Q.1 A. Describe the environmental fate and behavior of common toxicants. [7]

B. Discuss the regulatory guidelines for managing toxic chemicals in the environment. [7]

Q.2 Write an essay on heavy metal contamination in water resources. Explain current methods for mitigation and remediation. [14]

OR

Q.2 A. Explain health impacts due to chronic exposure to lead and mercury. [7]

B. How do heavy metals disrupt the food chain and ecosystem balance? [7]

Q.3 Discuss physical, chemical and biological indicators of environmental and occupational health. Illustrate your answer with examples. [14]

OR

Q.3 A. Define occupational hazards and describe control measures for radiation exposure. [7]

B. Detail the causes and effects of occupational dermatitis and cancer. [7]

Q.4 Outline different classes of pesticides and their mechanisms of action. Evaluate the global trends of biopesticide usage. [14]

OR

Q.4 A. Discuss modes of toxicity of organophosphates and carbamates. [7]

B. What are the ecological effects of persistent pesticides? [7]

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Q.5 Attempt any 7 out of 12 Short questions (One- or Two-line answer)

[14]

1. List common environmental toxicants and their sources.
2. Outline the uses and environmental risks of pesticides.
3. Write a brief note on the concept and types of biopesticides.
4. Explain the impact of mutagenic chemicals in the environment.
5. Describe the carcinogenic effects of polycyclic aromatic hydrocarbons.
6. Write a note on nitrosamines in food and water systems.
7. Discuss the harmful effects of tobacco chewing and smoking.
8. Explain phytotoxins and their mode of action.
9. What are animal toxins? Give examples and effects
10. Outline the significance of microbial toxins in environmental toxicology.
11. Describe the difference between in-vivo and in-vitro toxicity assessments.
12. Write a short note on skin and eye irritation tests.

