

**2011**

**M.Sc. Part-I Examination  
ENVIRONMENTAL SCIENCE**

**PAPER—III**

Full Marks : 100

Time : 4 Hours

*The figures in the right-hand margin indicate full marks.*

*Candidates are required to give that answers in their own words as far as practicable.*

*Illustrate the answers wherever necessary.*

Answer Q. No. 1 and any five questions from the rest.

1. Answer any ten of the following : 2×10

- (i) What is 'Kyoto Protocol' ?
- (ii) Mention relationship between D.O and B.O.D.
- (iii) What is meant by 'source and sink' of pollution ?
- (iv) What do you understand by water pollution cycle ?
- (v) What is 'PAN' ?
- (vi) Enlist factors leading to turbidity of water.
- (vii) What is CRZ ?
- (viii) 'Montreal protocol' is meant for abating which type of pollution ?
- (ix) What is sewage ? How does it differ from sludge ?
- (x) What are RSPMs ?
- (xi) Highlight the advantages of biomonitoring.
- (xii) Explain in brief 'biomagnification'.
- (xiii) What is acid rain ?
- (xiv) What is 'Air Quality standard' ?
- (xv) How does antioxidants prevent heavy metal toxicity ?
- (xvi) Differentiate between primary and secondary pollutants.

(Turn Over)

2. Briefly classify different types of pollution. Discuss the types and sources of different particulate pollutants of atmosphere. 6+10
3. What is eutrophication? State the differences between natural and cultural eutrophication. What are the factors responsible for eutrophication and how do they cause eutrophication. What are the environmental impact of eutrophication? 2+2+6+6
4. Draw the relationship between 'Green House Effect' and 'Global Warming'. Highlight the environmental impacts of global warming'. 6+10
5. Briefly discuss the properties of different chemical elements and their mode of interactions leading to the formation of acid rain. Mention the environmental impacts of acid rain. 8+8
6. What is 'Ozone Hole'? Describe the nature, source of pollutants and interaction for creating of such holes. What are the environmental consequences of such pollution? 2+8+6
7. Mention the sources of ground water contamination. State the composition of municipal and industrial sewage. Discuss the bioremediation of sewage water. 2+6+8
8. Explain different sources of marine pollution. What are the impacts of pollution in the marine environment? Write about some measures to prevent marine pollution. 6+4+6
9. What are the sources of Arsenic in the environment? State the route of entry of arsenic in the body. Discuss the effects of chronic poisoning of arsenic in the human body. Describe the safety measures to be adopted for protection against arsenic poisoning. 16
10. Write short notes on (any two) : 8×2
  - (a) Cadmium pollution ;
  - (b) Photochemical smog ;
  - (c) Integrated Coastal Zone Management ;
  - (d) e-waste pollution.