2013

M.Sc. Part–II Examination

ZOOLOGY

PAPER—VIII (Group—A)

Full Marks : 50

Time : 2 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

Write the Answers to Questions of each Unit in separate Booklet.

Answer any *four* questions taking *two* from each unit.

Unit—I

[Environmental Resource and Pollution]

1. Schematically highlight the classification of environmental resources. Briefly discuss on the sustainable management strategies on mineral resources. Add a note on the environmental hazards associated with the extraction and utilisation of mineral resources.

$3\frac{1}{2}+5+4$

2. Define eutrophication. Differentiate natural and cultural eutrophication. Briefly discuss the causes and environmental consequences of eutrophication.

$2+3+7\frac{1}{2}(3+4\frac{1}{2})$

3. What is Biosafety? State the significance of biosafety. Mention the detrimental effects of soil pollutants. What should be the remedial measures of soil pollution?

$2+2+4+4\frac{1}{2}$

4. Write Short Notes on (any *three*) : $4+4+4\frac{1}{2}$

(a) Oxygen demanding wastes;

(b) Biomagnification;

(c) Environmental impact of thermal pollution;

(d) Ambient sound level standard in India;

(e) Role of meteorological factors causing acid-rain.

Unit—II

[Ecotoxicology]

5. (a) Name one neurotoxic agent. Explain mode of its action. 1+4

(b) Comment on blood brain barrier. $2\frac{1}{2}$

(c) What are universal antidotes? How do these agents work? 1+4

6. (a) Define xenobiotics and xenobionts.

(b) Compare and differentiate between pollutants and xenobionts.

(c) Add a note on the heavy mental toxicity with special emphasis on Arsenic and lead. $4+3+5\frac{1}{2}$

7. (a) Define bioassay. Discuss protocol for determining LC_{50} of an aquatic pollutant for fish in glass aquaria. $2+5\frac{1}{2}$

(b) State factors responsible for influencing acute toxicity of heavy metals to aquatic organisms. 5

8. Write short notes (any *three*) : $4+4+4\frac{1}{2}$

(a) Bioaccumulation and bio-activation;

(b) Corrosive pollutants;

(c) Phase–II reaction;

(d) Maximum Acceptable Toxicant Concentration (MATC);

(e) Chelation Therapy.

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