

2016

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. Define environmental resources. Briefly discuss on different fossil fuels — their mode of formation and properties. Briefly highlight different non-conventional energy resources.

2+4+6 $\frac{1}{2}$

(Turn Over)

2. Differentiate point pollution from non-point one. Discuss on the environmental impact of oxygen demanding wastes. Add a note on the underlying scientific principle on Tertiary Sewage Treatment process.

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

3. Explain renewable and non-renewable resources with examples. State the merits and demerits of monoculture forestry. Describe the process of harnessing of geothermal energy.

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

4. Write explanatory notes on the following :

(a) Fog and smog.

Or

Green house gases. 4

(b) Hubbert curve for oil.

Or

Recycling of solid wastes. 4

(c) State the effects of noise pollution on human health.

Or

Differentiate BOD from COD. 4 $\frac{1}{2}$

Unit—II

[Ecotoxicology]

5. (i) Write down the route of entry, source, mechanism of action of the following corrosive pollutants :
(a) O₃, (b) HNO₃, and (c) CO. 6
- (ii) Name one metabolic pollutant. State the source, interference with biochemical cycle and mechanism of action. 6 $\frac{1}{2}$
6. (i) What do you mean by Xenobionts? 2
- (ii) Classify xenobionts based on their physical, chemical and physiological nature. Cite examples. 3×3
- (iii) All pollutants are not xenobionts. — Justify. 1 $\frac{1}{2}$
7. (i) What do you mean by Chelation therapy? 2 $\frac{1}{2}$
- (ii) Mention the important properties of a good chelating agent. 3
- (iii) Discuss about safe level to human, source and impact of Mercury and Lead. 7

8. Write short notes on (any three) :

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

(a) Toxicity bioassay technique.

Or

Bioaccumulation and biomagnification.

(b) Biosafety.

Or

Mutagenic xenobiotics.

(c) Antidote and its role in toxicity management.

Or

Chelation therapy.

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