

2017

M.Sc. Part-II Examination

ZOOLOGY

PAPER—VIII

Full Marks : 100

Time : 4 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.

Use separate Answer-scripts for each group.

Group-A

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

Unit—I

[Environmental Resource and Pollution]

1. Define pollution. State the causes and effects of air pollution. 2+5 $\frac{1}{2}$ +5

2. Classify natural resources with example. Write a note on biosafety. Explain why fossil fuels are non-renewable?

6+3 $\frac{1}{2}$ +3

(Turn Over)

3. What is geothermal energy? Describe the process of harnessing of geothermal energy. Mention the advantages and disadvantages of geothermal energy. $2\frac{1}{2}+5+5$

4. Write explanatory notes on the following :

(a) Eutrophication.

Or

Acid rain.

4

(b) Cloud's graphic model of depletion curves.

Or

Causes of global climate change.

$4\frac{1}{2}$

(c) Composition of air.

Or

Effects of noise pollution human health.

4

Unit—II

[Ecotoxicology]

5. (a) Define 'pollutants' and 'xenobionts' with proper examples.

(b) What do you mean by 'acute' and 'chronic' toxicity?

(c) How do you determine the pollution indicator animal species?

(d) Add a note on source and mechanism of action of Nicotine in human. $3+3+2\frac{1}{2}+4$

6. (a) What are the characters of a heavy metal?

(b) Mention the source safe level and impact of Arsenic contamination in human.

(c) Discuss about biomagnification to toxic substance.

(d) Add a note on toxic chemicals in food.

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

7. (a) What do you mean by biotransformation?

(b) Discuss the steps of biotransformation of a molecule.

(c) Illustrate the phenomenon of bioaccumulation.

(d) Add a note on radioactive pollutants. $2+5+3+2\frac{1}{2}$

8. Write short notes on the following :

(a) Toxicity bioassay ;

(b) Chelation therapy ;

(c) Neurotoxic chemicals ;

(d) Toxicokinetics.

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