

2018

M.Sc.

Part-II Examination

ZOOLOGY

PAPER—VIII A

Full Marks : 50

Time : 2 Hours

The figures in the right-hand 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 unit.

Group—A

Answer four questions taking two from each unit.

Unit—I

(Environmental Resource and Pollution)

1. Define renewable and non-renewable resources with examples. Describe the mechanism of nuclear energy production. State the advantages and limitations of nuclear energy. 3+6½+3

(Turn Over)

2. What are green house gasses? State the anthropogenic sources of green house gasses. Discuss how global climate change is being stimulated due to excessive release of green house gasses into the atmosphere. What is smog?

2+2+6½+2

3. What is photochemical smog? How does it form? Differentiate London type of photochemical smog from Loss Angelles one. What are the impacts of human health.

2+2½+4+4

4. (a) Write explanatory notes on the following :

Effect of acid rain on aquatic ecosystem.

Or

Write a note on recycling of solid wastes.

- (b) Give a diagrammatic representation of the zonation of atmosphere.

Or

State the effects of thermal power plants on aquatic organisms.

- (c) Write a note on any one of the following :

(i) Biomagnification,

(ii) 'Green revolution enhancing soil pollution' — Justify the statement.

(iii) Ecological impact of chemical fertilizers. 4½+4+4

Unit—II

(Ecotoxicology)

5. (a) What do you mean by drug metabolism?

(b) Discuss the different steps of drug metabolism.

(c) State the importance of Cytochrome P450.

2+7+3½

6. (a) What is MATC?

(b) What is adduct? Give an example.

(c) What do you mean by dose response relationship?

(d) State the mechanism of action of synthetic pyrethroid.

2+3+3½+4

7. (a) State the major heavy metals in fly ash.
- (b) What is Minamata disease ?
- (c) State the difference between bioaccumulation and biomagnification.
- (d) Add a note on Chelation therapy. 2+2+4½+4

8. Write short notes on the following :

- (a) Bioindicator,
- (b) Corrosive chemicals,
- (c) LC₅₀,
- (d) Ach E. 3+3+3+3½
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