

M. Sc. 3rd Semester Examination, 2023

ZOOLOGY

PAPER -- ZOO-301.1 & 301.2

Full Marks : 50

Time : 2 hours

The figures in the right hand margin indicate marks

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

PAPER -- ZOO-301.1

(Entomology)

Marks : 20

GROUP--A

1. Answer any *two* of the following questions : 2 × 2

(a) What is Filter chamber? Mention its function. 1 + 1

(b) What is prothoracic gland? State its function. 1 + 1

(c) Name the order of Honey bee & cockroach.

(d) State the function of luciferin & luciferase.

2. Answer any *two* of the following questions : 4 × 2

(a) What is Aerolium? Where is it found? State its function. 1+1+2

(b) Write a note on Trail marking pheromone.

(c) State the difference between Control of a pest & IPM. Name one species specific insecticide used in IPM. 2 + 2

(d) Write down the modifications of procuticle & epicuticle.

3. Answer any *one* of the following question : 8 × 1

(a) Explain the neuroendocrine control of ecdysis & metamorphosis in insects.

- (b) Write down the scientific name of a jute pest. Mention its nature of damage & control measures.

PAPER – ZOO-301.2

(*Ecotoxicology*)

Marks : 20

GROUP – B

4. Answer any *two* of the following questions : 2 × 2
- (a) Mention the difference among pollutants and xenobionts. 2
- (b) What do you mean by carcinogenic pollutants? Give two examples. 2
- (c) Define bio-concentration factor. 2
- (d) Write down the criteria of a good chelating agent. Give two examples. 2

5. Answer any **two** of the following questions : 4 × 2
- (a) State the sources and impact of lead pollution in the environment. 4
- (b) Write down the different steps of biotransformation process in phase - 1 reaction. 4
- (c) Give an idea about genotoxicity in aquatic environment. 4
- (d) Briefly discuss on metabolic pollutants. 4
6. Answer any **one** of the following question : 8 × 1
- (a) Define toxicokinetics. Discuss the sources and toxicokinetics of arsenic. 2 + 6
- (b) Define immunotoxicant with example. State the impact of plastic pollution in the environment. 3 + 5

[**Internal Assessment – 10 Marks**]
