

U.G. 2nd Semester Examination - 2020

ZOOLOGY

[PROGRAMME]

Course Code : ZOOG-CC-T-2

**Comparative Anatomy, Developmental Biology of
Vertebrates and Ecology**

Full Marks : 40

Time : 2½ 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.

1. Answer any **five** questions of the following:

2×5=10

- a) What is antler?
- b) What is heterodont dentition?
- c) What is venous heart?
- d) What is head kidney? State example where it is found.
- e) State the functions of Olfactory nerve and Optic nerve.
- f) Define spermatogenesis.

- g) What are the main functions of Amniotic fluid?
- h) Differentiate between Autecology and Synecology.

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

5×2=10

- a) What are main functions of Sebaceous gland? Briefly describe structure of teeth. 2+3
- b) State the modifications of aortic arches in reptiles with proper diagram. What is metanephros? 3+2
- c) What is fertilizin-antifertilizin reaction during fertilization of sea-Urchin? What is radial cleavage? State the significance of gastrulation. 2+1+2
- d) What is ecological succession? Give one example. What is climax community? 2+2+1

3. Answer any **two** questions of the following:

10×2=20

- a) Define conservation. What are the main aims of conservation? Differentiate between *in-situ* and *ex-situ* conservation. Give one example

each of national park, wildlife sanctuary and biosphere reserve of West Bengal. What is red data book? $2+2+2+3+1$

- b) Distinguish between food chain and food web. Describe energy flow through ecosystem by single channel energy flow model. What is ecological pyramid? $2+6+2$
- c) Define spermiogenesis. Describe the process of formation of proximal and distal centrioles during spermiogenesis. State the functions of sertoli cells. Briefly describe the gastrulation process in frog. $1+2+2+5$
- d) Briefly describe the structure of avian heart with labelled diagram. What is foramen of panizza? Name different types of epidermal glands of mammals with their functions and modifications. $(3+3)+1+(1+1+1)$
-