

IV Semester B.Sc. Examination, May 2017  
(Fresh + Repeaters) (CBCS) (2015-16 and Onwards)

ZOOLOGY - IV

Comp. Anatomy, Cell Biology, Immunology and Histology

Time : 3 Hours

Max. Marks : 70

- Instruction :** 1) Draw diagram *wherever* necessary.  
2) Answer should be either in **Kannada** or **English**.

PART - A

- I. Answer **any five** of the following : (5×3=15)
- 1) Sketch and label ctenoid scale.
  - 2) Give three differences between the brain of fish and frog.
  - 3) Define the terms phagocytosis and pinocytosis.
  - 4) Distinguish benign tumour from malignant tumour.
  - 5) Mention the role of natural killer cells.
  - 6) Write a note on circumvallate papilla.
  - 7) Write a note on taste bud.

PART - B

- II. Answer **any five** of the following : (5×5=25)
- 1) Trace the evolutionary trends of aortic arches in reptiles and mammals.
  - 2) Write a note on swimbladder in fishes.
  - 3) Distinguish between pronephros and metanephros, with example.
  - 4) Explain the structure and function of Golgi Complex.
  - 5) Explain the process of cell senescence.
  - 6) Explain the structure of polytene chromosome.
  - 7) With a neat labelled diagram, describe the histology of spleen.



## PART - C

III. Answer **any three** of the following :

(3×10=30)

- 1) Compare and comment on the integument of amphibian and mammal.
- 2) Give a comparative account of lungs in amphibia and bird.
- 3) Discuss the general properties of cancer cells and add a note on carcinogens.
- 4) Explain the different types of natural parthenogenesis with suitable example.
- 5) Discuss cell mediated immunity.
- 6) With a neat labelled diagram describe the histological details of Adrenal gland.