

IV Semester B.Sc. Examination, May 2017  
(2012 – 13 & Onwards)  
(Repeaters) (Prior to 2015 – 16) (New Scheme)  
ZOOLOGY – IV

Comparative Anatomy, Cell Biology, Immunology and Histology

Max. Marks : 70

Time : 3 Hours

**Instructions :** Draw diagrams *wherever* necessary. Answers should be written either in **Kannada** or **English**.

PART – A

I. Answer **any five** of the following.

(5×3=15)

- 1) Mention any three differences between the skin of fish and mammal.
- 2) Write a note on Syrinx.
- 3) Give a brief account of lysosomes.
- 4) Draw a neat labelled diagram of polytene chromosome.
- 5) Give the structure of thyroid follicle.
- 6) Write a note on cell senescence.
- 7) List any three histopathological changes in liver cirrhosis.

PART – B

II. Answer **any five** of the following.

(5×5=25)

- 1) Trace the evolutionary trend in the development of aortic arches in bird and mammal.
- 2) Draw a neat labelled diagram of vertical section of avian heart.
- 3) With a neat labelled diagram, describe the structure of Golgi complex.
- 4) Give an account of inflammatory response.
- 5) Describe the histological details of spleen.
- 6) Mention the cells of gastric glands and a note on their secretion.
- 7) What are mordants ? Mention their mode of action.



PART - C

III. Answer **any two** of the following.

(2x10=20)

- 1) Give a comparative account of the brain of lizard and bird.
- 2) Trace the evolutionary trends in the development of ear of amphibia and mammal.
- 3) Write notes on :
  - a) Thelytoky
  - b) Artificial parthenogenesis
- 4) Give the histological details of mammalian kidney.

PART - D

IV. Answer **any one** of the following.

(1x10=10)

- 1) Explain the fluid mosaic model of plasmamembrane and mention its functions.
- 2) Give the histological details of mammalian pancreas.

