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No. of Printed Pages : 2



GS-349

IV Semester B.Sc. Examination, May/June 2019
(CBCS) (Freshers+Repeaters) (2015-16 & onwards)



ZOOLOGY - IV

Comparative Anatomy, Cell Biology Immunology and Histology

Time : 3 Hours

Max. Marks : 70

- Instructions :** 1. Draw labelled diagrams wherever necessary.
2. Answers should be completely either in Kannada or English.

PART - A

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

5x3=15

1. Name the types of scales in fishes.
2. Mention respiratory organs in amphibia.
3. Distinguish between pronephros and mesonephros.
4. Define : (a) Osmosis
(b) Active transport
(c) Phagocytosis
5. What are giant chromosomes ? Mention the types.
6. Sketch and label taste bud.
7. Mention any three secretory cells of gastric gland with one function each.

PART - B

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

5x5=25

1. Give an account of swim bladders in fishes.
2. Sketch and label the basic plan of aortic arches in vertebrates.
3. Explain V.S. of mammalian skin.

P.T.O.



4. With an appropriate diagram, describe the structure of Golgi apparatus.
5. Write notes on :
 - (a) Physical Carcinogens
 - (b) Cell Senescence
6. With a neat labelled diagram. Explain the histology of thyroid gland.
7. Write an explanatory note on arrhenotoky.

PART - C

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

3x10=30

1. Compare and comment on the heart of amphibian with that of mammal, with a neat labelled sketches.
2. Brain of bird is comparatively better evolved than the brain of fish. Substantiate.
3. Discuss the first line of body defence.
4. Elaborate on the general properties of cancer cell.
5. Give an account of :
 - (a) Anatomical features of mammalian ear
 - (b) Cell inclusions
6. Describe the histological features of pancreas, with the help of labelled diagrams.