

2019

ZOOLOGY

( Major )

Paper : 3.1

( Comparative Anatomy and Histology )

Full Marks : 60

Time : 3 hours

*The figures in the margin indicate full marks  
for the questions*

1. State True or False (any two) : 1×2=2
  - (a) Reticular fibres join connective tissues to other tissues.
  - (b) Chondrocranium is the cartilaginous envelope of the brain.
  - (c) In most of the vertebrates thyroid gland is originated from cartilage.
  
2. Fill in the blanks (any three) : 1×3=3
  - (a) Toluidine blue is an example of \_\_\_\_ dye.
  - (b) Mammal's stomach is \_\_\_\_ in character.
  - (c) Branchiae are developed on the walls of some \_\_\_\_.
  - (d) The sense organ of scala media is known as \_\_\_\_.

3. Answer the following questions :  $1 \times 2 = 2$
- (a) Which is the common connective tissue of vertebrates?
  - (b) Write about functions and derivatives of somatic motor neuron.
4. Write notes on/Answer the following (any four) :  $2 \times 4 = 8$
- (a) Different cells of connective tissue
  - (b) Functions of blood
  - (c) Mordant
  - (d) Draw a neat labelled diagram of nephron.
  - (e) Integument of fishes
5. Answer/Write notes on the following (any three) :  $5 \times 3 = 15$
- (a) Describe the organ of hearing and balancing in amphibia.
  - (b) Give a comparative account of thyroid gland in birds and mammals.
  - (c) Describe the classification of dyes with their properties.
  - (d) Mesonephros and metanephros kidney
  - (e) Lymph and its functions

6. Answer the following questions (any three) :

10×3=30

(a) Explain about the different types of skeletal tissues, its occurrence, functions with proper diagrams.

5+2½+2½=10

(b) Describe the basic principles of fixation and staining. Write its importance in biological sciences.

5+5=10

(c) Draw a labelled diagram of brain in Reptiles and describe its advancement over amphibian brain.

5+5=10

(d) Give a comparative account of the integument in vertebrate series.

10

(e) What is neuron? Write about the structure and function of a neuron.

2+8=10

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