

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 \_\_\_\_.



( 2 )

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

( 3 )

6. Answer the following questions (any three) :

$$10 \times 3 = 30$$

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

$$5 + 2\frac{1}{2} + 2\frac{1}{2} = 10$$

- (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.

$$2 + 8 = 10$$

\*\*\*



( 2 )

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

( 3 )

6. Answer the following questions (any three) :

$$10 \times 3 = 30$$

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

$$5 + 2\frac{1}{2} + 2\frac{1}{2} = 10$$

- (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.

$$2 + 8 = 10$$

\*\*\*