

Zoology [Honours]

[CBCS]

B.Sc. Third Semester End Examination-2023

(Regular & Supplementary Paper)

PAPER-C6T

Full Marks: 40

Time: 02 Hrs

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

Group A

1. **Answer any FIVE questions of the following:** **5x2= 10**
 - a) What do you mean by Auxochromophoric system?
 - b) What are the difference between non-additive and additive fixative.
 - c) What is Osteoporosis?
 - d) State the changes take place in A-band and I-band during seiding filament event of muscle fibre
 - e) What do you mean by epimysium and endomysium?
 - f) Why pancreas is a mixed gland?
 - g) Write the name of endocrine gland and its secretion which is responsible for appetite.
 - h) What is cryptorchidism?

(2)

Group B

2. **Answer any FOUR questions of the following:** **4x5 = 20**
- a) i) Mention the chemical composition of Bounis fluid and Susa's fixative.
 - ii) Write a short note on – Mordanting and chelation 2+3
 - b) Briefly describe the process of endochondral ossification. 5
 - c) Describe the microscopic structure of a skeletal muscle fibre with figure. 5
 - d) Write down the cellular structure of Adenohypophysis and a note on the respective endocrine functions of the same. 5
 - e) Write the mechanism of hormone action when you are in fight a flight situation. 5
 - f) Describe the endometrial cycle with a suitable diagram. 5

Group C

3. **Answer any ONE question of the following:** **1x10 = 10**
- a) i) Differentiate between “depolarization” and “hyperpolarization”.
 - ii) Briefly describe the process how chemical synapses transmit signals from one neuron to another
 - iii) What is GABA? 2+7+1
 - b) Briefly describe the molecular and chemical basis of muscle contraction with two phases (stimulation of muscle fibre by motor neuron and excitation – contraction coupling) with detailed figure. 10