

M.Sc.- I (Zoology) (CBCS Pattern) Sem-I
PSCZOOT02 - Paper- II : General Physiology

P. Pages : 1

Time : Three Hours



GUG/W/22/11176

Max. Marks : 80

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- Notes :
1. All questions are compulsory.
 2. All questions carry equal marks.
 3. Illustrate your answers with well labelled diagrams wherever necessary.

1. Describe in detail the enzyme classification and mechanism of enzyme action. **16**

OR

- a) Give an account on structure of hemoglobin and mechanism of oxygen transport.
- b) Give an account on chemical nature and biosynthesis of neurotransmitters.

2. Describe in detail adaptations and regulatory mechanisms of thermoregulation in poikilotherms. **16**

OR

- a) Osmoregulation in Pisces.
- b) What is signal transduction? Comment on role of membrane receptors in signal transduction.

3. Write an account on cardiac cycle. **16**

OR

- a) Describe in detail the classification of carbohydrates.
- b) Give an account on digestion and absorption of proteins in the gastrointestinal tract.

4. Describe in detail the chemistry and functions of cerebrospinal fluid. **16**

OR

- a) Give an account on reflex action.
- b) What is environmental stress? Elaborate on it.

5. Attempt the following. **16**

- a) Chromatophores.
- b) Bioluminescence.
- c) Oxidation of fatty acids.
- d) Egg shell formation.
