QP Code : 77053

(2½ Hours) **[Total Marks : 75**

N.B. : (1) **All** questions are **compulsory**.
(2) **All** questions carry **equal marks**.
(3) **Draw** neat **labelled diagrams** wherever **necessary**.
(4) **Questions** should be **answered** in **order**.

1. Describe the following :
   (a) Mechanism of enzyme action. 7
   OR
   (a) Different classes of enzymes. 7
   (b) Derivation of Michaelis-Menten equation. 8
   OR
   (b) Chemical structure of enzymes. 8

2. Explain the following :
   (a) Concept and classification of chemical messengers. 7
   OR
   (a) GABA as a neurotransmitter. 7
   (b) Acetylcholine as a neurotransmitter. 8
   OR
   (b) Mode of working of neurotransmitters. 8

3. Describe the following :
   (a) Possitive feedback mechanism with suitable example. 7
   OR
   (a) Ionic regulation in iso-osmotic environment. 7
   (b) Role of brown fat in thermogenesis. 8
   OR
   (b) Problems of living in terrestrial environment. 8

4. Explain the following :
   (a) Myogenic heart. 7
   OR
   (a) Endocrine regulation of pregnancy in mammals. 7

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(b) Chemical and nervous regulation of heart. 8

OR

(b) Menstrual cycle. 8

5. Write short note on :

(a) Enzyme as a biocatalyst. 4

OR

(a) Effect of pH on enzyme activity. 4

(b) Neurosecretory substances. 4

OR

(b) Aspartic acid. 4

(c) Daily torpor. 4

OR

(c) Acclimatization. 4

(d) Estrous cycle. 3

OR

(d) Suction pump in open circulation. 3
