

## BIOCHEMISTRY AND ANIMAL PHYSIOLOGY - I

Time : Three Hours]

[Maximum Marks : 70

**Note :** Attempt two questions each from Section A and B carrying 12 marks each, and the entire Section C consisting of 11 short answer type questions carrying 2 marks each.

### Section - A

1. What are Enzymes ? Discuss the chemical nature and properties of enzymes. 12
2. (a) Give the functions of Monosaccharides. (6,6)  
(b) Differentiate between Saturated and Unsaturated fatty acids.
3. Describe Hexose Moophosphate Shunt. Give its significance also. 12
4. Write notes on the following : (5,7)  
(a) Transamination. (b) Gluconeogenesis

### Section - B

5. Discuss the origin and regulation of Heart beat in mammalian heart. 12
6. Write notes on the following : (6,6)  
(a) Role of HCl in digestion. (b) Oxygen-dissolution curve of Haemoglobin.
7. Discuss briefly the endocrine role of Pituitary gland. 12
8. Write notes on the following : (6,6)  
(a) Conduction of Nerve impulse through a synapse.  
(b) Counter-current mechanism.

### Section - C

9. Attempt all the following : (11×2=22)
  - (a) Differentiate between Nucleosides and Nucleotide.
  - (b) What is Haladane effect ?
  - (c) What are Primary and Secondary myofilaments ?
  - (d) Define Extracellular and Intracellular digestion.
  - (e) What is the significance of Krebs' cycle ?
  - (f) What is the importance of Rennin in digesion ?
  - (g) What is Haemoposis ?
  - (h) Write a note on Chloride shift.
  - (i) Differentiate between Resting potential and Action potential.
  - (j) What is Ultrafiltration ?
  - (k) Give the function of Progesterone.