Reg. No. : | | | | | | | | | | |

R 3124

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Fifth Semester

Biotechnology

BT 1302 — BIOCHEMISTRY – II

(Regulation 2004)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Write the importance of porphyrin.

2. Differentiate adrenaline and noradrenaline.

3. What is SRP?

4. Define vesicular trafficking.

5. What are the elemental sources of purine?

6. What is meant by protein turn over?

7. What are tropanins?

8. What are contractile proteins?

9. Define symport and antiport.

10. Differentiate carrier proteins from channel proteins.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the steps involved in the process of disposal of ammonia in the body by Embden Hensleit pathway. (10)

(ii) Write the structures of essential amino acids. (6)

Or

(b) Explain the biosynthesis of epinephrine from tryrosine. (16)

12. (a) (i) How anchor sequence determine protein orientation? Explain. (10)

(ii) Discuss the role of chaperones in protein folding. (6)

Or

(b) (i) List out the major cell structures involved in the sorting pathway. (6)

(ii) Ubiquitination targets protein for degradation. Explain (10)

13. (a) (i) Differentiate alpha and beta amylase action on starch. (6)

(ii) Describe the major regulatory mechanisms of fatty acid metabolism in humans. (10)

Or

(b) Explain the salvage pathway of purines and pyrimidines. (16)

14. (a) (i) Explain the structure of actin and myosin with suitable diagram. (10)

(ii) Draw and explain the structure of Microfilament. (6)

Or

(b) (i) Differentiate excitation and relaxation phenomena. (6)

(ii) Explain the biochemical basics of muscle relaxation. (10)

15. (a) Explain different types of neurotransmitters and their mechanism of action. (16)

Or

(b) (i) How "Potential coupled ATP generation" is achieved in mitochondria. (10)

(ii) Explain ligand – gated channels. (6)
