

CBCS Scheme

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15BT33

Third Semester B.E. Degree Examination, Dec.2016/Jan.2017 Biochemistry

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Explain any four types of chemical reaction. (08 Marks)
b. What are Amino Acids? Write the structure of Amino acids containing phenol, Imidazole and Indole group. (08 Marks)

OR

- 2 a. Define pH. Derive Henderson – Hasselbalch equation. (08 Marks)
b. Note on classification of polysaccharides. Give one example for each with structure. (08 Marks)

Module-2

- 3 a. Explain in detail Dark reaction. (08 Marks)
b. What is Coupled reaction? Give 2 examples. (08 Marks)

OR

- 4 a. "ATP is the energy currency of cell", justify the statement and write the structure. (08 Marks)
b. Differentiate between Cyclic and Non cyclic Photophosphorylation. (08 Marks)

Module-3

- 5 a. Give the mechanism of glucose and amino acid transport. (08 Marks)
b. With neat labeled diagram, explain fluid – mosaic model for biological membrane. (08 Marks)

OR

- 6 a. Explain different types of transports in biological membrane. (08 Marks)
b. Explain the transport involved in signal transduction process. (08 Marks)

Module-4

- 7 a. With structure in detail, explain TCA cycle. (08 Marks)
b. Give the energy balance sheet for the complete oxidation of glucose. (08 Marks)

OR

- 8 a. Explain in detail biosynthesis of cholesterol, starting from Acetyl COA. (10 Marks)
b. Explain the activation of fatty acid and how it is transported to mitochondria. (06 Marks)

Module-5

- 9 a. Describe transamination and deamination with example. (08 Marks)
b. Explain urea cycle with reaction sequence. (08 Marks)

OR

- 10 a. Explain denovo synthesis of pyrimidine nucleotides. (08 Marks)
b. Discuss the recycling of nucleotides by salvage pathway. (08 Marks)

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