

CBCS Scheme

USN

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15BT33

Third Semester B.E. Degree Examination, Dec.2017/Jan.2018

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 the structure and functions of any three biologically important peptides. (06 Marks)
b. Write the classification of carbohydrates. Explain them with example. (10 Marks)

OR

- 2 a. Write the structure of the following amino acids : W, G, A, D and H. (10 Marks)
b. Differentiate DNA from RNA molecule. (06 Marks)

Module-2

- 3 a. What are high energy compounds? Give the structure and properties of ATP. (10 Marks)
b. What is Oxidation reduction reactions? Give example. (06 Marks)

OR

- 4 a. Justify the Statement "ATP is the energy currency of the cell". (06 Marks)
b. Explain 2 scheme of Photosynthesis. (10 Marks)

Module-3

- 5 a. Give the mechanism of action of Na⁺ / K⁺ transport. Mention its significance. (08 Marks)
b. Define Facilitated and Passive transport. Explain the mechanism with an example each. (08 Marks)

OR

- 6 a. Explain Fluid Mosaic model and its permeability properties. (10 Marks)
b. What is a coupling reaction? Explain in detail with ATP and NAD⁺. (06 Marks)

Module-4

- 7 a. How is glucose synthesized from non - carbohydrate sources? Explain. (06 Marks)
b. How is Acetyl - CoA catabolised in aerobic cell? How is the pathway regulated? (10 Marks)

OR

- 8 a. Give the energetics of β - oxidation. (04 Marks)
b. Explain Biosynthesis of cholesterol and its regulation. (12 Marks)

Module-5

- 9 a. Explain the denovo synthesis of pyrimidine nucleotides. (08 Marks)
b. Explain the bidegradation of purine nucleotides. (08 Marks)

OR

- 10 a. How is Ammonia excreted away from the body? (08 Marks)
b. How are aminoacids catabolised? Write in detail. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.