



# CBCS SCHEME

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15BT33

## Third Semester B.E. Degree Examination, June/July 2019 Biochemistry

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. What are Carbohydrate? Classify the carbohydrates based on sugar units with example. (08 Marks)  
b. Distinguish between : i) Pyranose and Furanose ii) Nucleotide and Nucleoside  
iii) Amylase and amylopectin iv) Enantiomers and diastereomers. (08 Marks)

OR

- 2 a. Explain Titration curve of amino acid. Write its significance. (08 Marks)  
b. Write any four difference between DNA and RNA. (04 Marks)  
c. Recall and write structure of Triacylglycerol and write any two biological importances. (04 Marks)

### Module-2

- 3 a. Explain Cyclic and Non Cyclic photophosphorylation. (10 Marks)  
b. Write a note on Energy flow cycle. (06 Marks)

OR

- 4 a. What are Coupling Reaction? Explain Coupling reaction of ATP. (06 Marks)  
b. Define Enthalpy Entropy and free energy. How they are related to each other? (06 Marks)  
c. Explain the structure of ATP. (04 Marks)

### Module-3

- 5 a. Explain Fluid Mosaic Model of cell membrane. (08 Marks)  
b. How voltage and ligand gated ion channels are involved in signal transduction process? (08 Marks)

OR

- 6 a. Show the organisation of transport activity in cell. (06 Marks)  
b. Explain Primary and Secondary active transport system. (06 Marks)  
c. Mention about Permeability of cell membrane. (04 Marks)

### Module-4

- 7 a. Write reactions for converting glucose to pyruvate. (08 Marks)  
b. Explain the oxidation of Palmitic acid by  $\beta$  - Oxidation. (08 Marks)

OR

- 8 a. Explain chemo – osmotic model for ATP synthesis. (06 Marks)  
b. Explain PPP pathway and write its significance. (10 Marks)

### Module-5

- 9 a. Construct urea cycle. (08 Marks)  
b. Explain the Biosynthesis of IMP. (08 Marks)

OR

- 10 a. Explain Deamination and Transamination Reaction. (08 Marks)  
b. How AMP and GMP converted to Uric acid? (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.