

18C62

B. Tech. EXAMINATION, 2021

(Third Semester)

(C Scheme) (Main Only)

(BT)

BT203C

BIOCHEMISTRY

Time : 2½ Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Four* questions in all. All questions carry equal marks.

1. Write short notes on any *five* the following :

- (i) Peptide bond
- (ii) Mutarotation
- (iii) Anabolism
- (iv) Pyrimidines
- (v) Nucleosides
- (vi) Iodine number
- (vii) Oligosaccharides
- (viii) Zwitter ion.

2. Explain the following :
 - (a) Weak acids and bases with suitable examples.
 - (b) Handerson Hasselbach equation.
 - (c) Water as biological solvent.
3. What are polysaccharides, mucopolysaccharides and bacterial cell wall polysaccharides ? Explain their biological functions.
4. Classify proteins on the basis of structure. Describe the forces responsible for stabilizing the structure of proteins.
5. Describe the following :
 - (a) Essential and nonessential amino acids.
 - (b) Amino acids as zwitter ion and their isoelectric point.
 - (c) Salting in and salting out of proteins.
6.
 - (a) Explain different types of phospholipids and their functions in the body.
 - (b) Describe the structure and function of cholesterol.
7. Classify simple and complex lipids with examples.
8. Explain different types of DNA and their functions.
9. Describe double helical model of DNA structure and forces responsible for stabilizing it.