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Reg. No.

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III Semester B.Sc. Degree Examination, April - 2022

BIO TECHNOLOGY

Biochemistry and Biophysics

(CBCS Scheme Repeaters)



Time : 3 Hours

Maximum Marks : 70

Instructions to candidates :

- 1) Part I and Part II must be answered in Single/Same Booklet.
- 2) Draw the structure and neat labelled diagrams wherever necessary.

PART - I

BIO CHEMISTRY

SECTION - A

I. Write short notes on the following.

(4×2=8)

- 1) Peptide bond
- 2) Transport proteins
- 3) Coenzymes
- 4) Mutarotation

SECTION - B

II. Answer any two of the following.

(2×6=12)

- 5) Explain the acidic and basic properties of amino acids.
- 6) What are polysaccharides? Add a note on their importance.
- 7) Write the general properties of lipids.

SECTION - C

III. Answer any two of the following.

(2×10=20)

- 8) Explain the primary and secondary structures of proteins.
- 9) Mention the different classes of enzymes. Give one example for each class.
- 10) Write short notes on
 - a) Vitamins and their dietary source
 - b) Glucocorticoid hormones

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**SECTION - D**

IV. Answer the following in a word or sentence each. (5×1=5)

- 11) Name an aromatic aminoacid.
- 12) What is the non protein part of holoenzyme?
- 13) What is the monosaccharide present in the fruits?
- 14) Expand PUFA
- 15) Name any one female sex hormone.

PART - II**BIO PHYSICS****SECTION - A**

V. Answer any two of the following. (2×5=10)

- 16) Explain the biologically important buffers.
- 17) Write the scope of biophysics
- 18) Explain Fluorescence spectroscopy. Discuss its applications.

SECTION - B

VI. Answer any one of the following. (1×10=10)

- 19) Explain the principle and applications of column chromatography.
- 20) Discuss the working principle and applications of UV-visible spectroscopy.

SECTION - C

VII. Answer the following in a word or sentence each. (5×1=5)

- 21) Define pH.
 - 22) State first Law of Thermodynamics
 - 23) What are Vanderwaal's forces?
 - 24) What is the unit of sedimentation co-efficient?
 - 25) Expand NMR.
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