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PGIS -N 1065 B-2K13

M.Sc. Ist Semester (CBCS) Degree Examination

Biotechnology

(Biochemistry)

Paper - HCT -1.1

(New)

Time : 3 Hours Maximum Marks :80

Instructions to Candidates :

1. Section 'A' is all compulsory question
2. Answer B&C section as per instruction.

Section - A

Answer in brief **(10x2=20)**

1) Ionic bond
2) Structure of any two aromatic amino acids
3) K- cat
4) α - Oxidation
5) Glycosylation
6) Lipoproteins
7) Nucleotide
8) Kranz syndrome
9) Porphyrine ring
10) Aquaporines

Section - B

Answer any **four** of the following. **(4x6=24)**

11) Write a note on life supporting properties of water.
12) Explain structure and functional relationship of ribonuclease
13) Derive mechalic menton constant

14) Explain structure of t-RNA

15) Differentiate between α -helix and β plated sheats of protein conformations

16) Write an account on properties of membranes proteins.

Section - C

Answer any **three** of the following **(3x12=36)**

17) Describe the classification of carbohydrates with examples

18) Discuss the properties of enzymes with reference to inhibition and allosteric nature

19) Explain the mechanism of photo respiration

20) Write an account on synthesis of fatty acids.

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PGIS-N 1071 B-2K13

M.Sc Ist Semester Degree Examination

Biotechnology

(Bioanalytical Techniques)

Paper -SCT-1.1

(New)

Time : 3 Hours Maximum Marks : 80

Instructions to condidates:

1. Section **A** has all **compulsory** questions.
2. .Answer **B** and **C** sections as per instructions.

Section - A

Answer the following in brief. **(10x2=20)**

1) Zymograms

2) Dialysis

3) Flash evaporation

4) RCF

5) Circular Dichroism

6) Isoelectro focussing

7) IR

8) Transilluminator

9) Donnan effect

10) Confocal Microscopy

Section - B

Answer any **four** of the following (4x6=24)

11. Liquid santillation counter

12. X-ray crystallography

13 Cerenkov radiation

14. Fluorescence Microscopy

15. Capillary electrophoresis

16. Cell disruption

Section - C

Answer any **three** of the following (3x12=36)

17. Discuss in detail the theory and application of polyacrylamide gel electrophoresis.

18. Write an detailed account on MALDI - TOF and add a note on its significance

19 Give an account of column chromatography. Add a note on Reverse phase chromatography.

20. Write an account on the technique involved in cell immobilization.