(6 pages) **Reg. No. :** .....

Code No. : 6261 **Sub. Code : PMBM 12/ ZMBM 12**

M.Sc. (CBCS) DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Microbiology

BIOCHEMISTRY

(For those who joined in July 2017 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is an example for heteropoly saccharide?

   (a) Hyaluronic acid

   (b) Gelatin

   (c) Glycogen

   (d) Both (a) and (b)

2. Glucose residues in amylase are linked by

(a) α 1-4 (b) β 1-4

(c) α 1-6 (d) β 1-6

3. Beta-oxidation of fatty acids takes place at

(a) Peroxisome

(b) Mitochondria

(c) Endoplasmic Reticulum

(d) Mitochondria and peroxisomes

4. In most of the naturally occurring-unsaturated fatty acids the double bonds will be placed between

(a) C6-C7 (b) C7-C8

(c) C8-C9 (d) C9-C10

5. Aminoacids with aromatic side chain are

(a) tryptophan, asparagine, tyrosine

(b) tryptophan, threonine, tyrosine

(c) phenylalanine, tryptophan, serine

(d) phenylalanine, tryptophan, tyrosine

6. The group transferring coenzyme

(a) CoA (b) NAD^+

(c) $NADP^+$ (d) FAD

7. The sugar molecule present in nucleotide is

(a) Triose (b) Tetrose

(c) Pentose (d) Hexose

8. Which of the following reagents are used for precipitating DNA?

(a) Isopropanol (b) Ethanol

(c) Both (a) and (b) (d) None of these

9. In general normal Blood Urea Nitrogen (BUN) levels

(a) 8 to 24 mg/dL (b) 1 to 17 dL

(c) 6 to 21 mg/dL (d) 0 to 24 mg/dL

10. What is the optimum temperature used to store blood right after collecting it?

(a) 25°C (b) 22°C

(c) 20°C (d) 15°C

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Write a note on Muta rotation.

Or

(b) Write briefly about Muco polysaccharides.

12. (a) Define lipids. Write briefly about their function.

Or

(b) Write briefly about Triglycerides.

13. (a) Classify Proteins based on their shape.

Or

(b) Write a note on Isoenzymes and their clinical significance.

14. (a) Write a note on tRNA.

Or

(b) Give examples for pyrimidine nucleotides. Mention their functions.

15. (a) What are the types of Anticoagulants?

Or

(b) Explain about Lumbar puncture technique to collect CSF for biomedical research.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Explain in detail about various forms of hetero polysaccharides occurs in plants and animals and state their clinical significance.

Or

(b) Explain classification of carbohydrates and stereoisomerism.

17. (a) Define phospholipids. Classify them with suitable examples and state their functions.

Or

(b) Classify fatty acids in various ways with suitable examples.

18. (a) Explain in detail the structural organization of proteins.

Or

(b) Add a detailed note on classification of Amino acid based on their function and requirement.

19. (a) Exemplify DNA polymorphism.

Or

(b) Summarise the biological importance of nucleotides.

20. (a) Why is Pre-analytical blood sample haemolysis still a ongoing problem in our hospital? Justify.

Or

(b) How will you maintain quality of the laboratory testing during analysis in biochemistry laboratory?

———————