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Reg. No. : .....

**Code No. : 30407 E**      **Sub. Code : EEMI 11/  
FEMI 11**

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2026.

First Semester

Microbiology — Core

Major — BASIC AND CLINICAL BIOCHEMISTRY

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Carbohydrates are \_\_\_\_\_ molecules.

- (a) glucose                      (b) sugar  
(c) energy                        (d) carbon

2. Which of these is not a lipid?

- (a) fat                              (b) oils  
(c) proteins                        (d) waxes

3. One of the following organ is not the major site of cholesterol

- (a) Liver                            (b) Spleen  
(c) Adrenal gland                (d) Adipose tissue

4. Which among the following is a non-essential amino acid?

- (a) Serine                            (b) Threonine  
(c) Lysine                            (d) Histidine

5. Which of the following cell organelles is involved in the process of protein synthesis?

- (a) cytoplasm                      (b) ribosomes  
(c) mitochondria                (d) nucleus

6. Which of the following is an important storage site of glycogen?

- (a) Adipose tissue                (b) Cardiac muscle  
(c) Spleen                            (d) Liver

7. The most common symptom of lactose intolerance is
- (a) Abdominal pain
  - (b) Bloating
  - (c) Cramps
  - (d) All of the above
8. The simplest amino acid is
- (a) Glycine
  - (b) Alanine
  - (c) Asparagine
  - (d) Tyrosine
9. The naturally occurring proteins consists of
- (a) D-Amino acids
  - (b) L-Amino acids
  - (c) Both (a) and (b)
  - (d) None of these
10. Infants gastric juice contains
- (a) Nuclease, pepsinogen, lipase
  - (b) Maltase, pepsinogen, renin
  - (c) Amylase, renin, pepsinogen
  - (d) Pepsinogen, lipase, renin

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Define monosaccharides. Explain the structure of fructose.
- Or
- (b) State the general function of cholesterol.
12. (a) Explain the general classification of amino acids.
- Or
- (b) State the general properties of protein.
13. (a) Explain phenylketonuria with its symptoms.
- Or
- (b) What is sphingolipidosis. Explain its clinical symptoms.
14. (a) Explain aminoacidurias. How it prevents?
- Or
- (b) Give a brief account on alkaptonuria.

15. (a) State the clinical significance of aspartate aminotransferase.

Or

- (b) What are the diagnostic enzymology assay to adopt lactate dehydrogenase?

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) What are polysaccharides? Explain the structure and function of it.

Or

- (b) Describe the classification and functions of lipids.

17. (a) Explain the classification of amino acids.

Or

- (b) Explain the structure and biological significance of protein.

18. (a) Describe glycogen storage diseases with its clinical symptoms.

Or

- (b) State the factors involved in lipid metabolism.

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19. (a) Explain the phenylketonuria with clinical symptoms.

Or

- (b) How amino acid metabolism under go clinical conditions?

20. (a) Evaluate the clinical assessment of gastric and intestinal functions.

Or

- (b) How will you diagnose the enzyme activity of creatine kinase?

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