

Code No. : 7789

Sub. Code : KMBM 12/  
PMBM 12

M.Sc. (CBCS) DEGREE EXAMINATION,  
NOVEMBER 2019.

First Semester

Microbiology

BIOCHEMISTRY

(For those who joined in July 2016 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following are an example of epimers?  
(a) Glucose and Galactose  
(b) Glucose and Ribose  
(c) Mannose and Glucose  
(d) (a) and (b)

2. Which of the following is an example of disaccharide?  
(a) Glucose (b) Fructose  
(c) Galactose (d) Maltose
3. Which of the following is an essential fatty acid?  
(a) Linolenic (b) Palmitic  
(c) Oleic (d) Stearic
4. Where does triglycerol form  
(a) Liver (b) Kidneys  
(c) Adipose tissue (d) Heart
5. The rate determining step of Michaelis-Menten kinetics is  
(a) The complex dissociation step to produce products  
(b) The complex formation step  
(c) The product formation step  
(d) None of the above

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

Each answer should not exceed 250 words.

6. When the velocity of enzyme activity is plotted against substrate concentration, which of the following is obtained?
- (a) Hyperbolic curve  
(b) Parabola  
(c) Straight line with positive slope  
(d) Straight line with negative slope
7. One of the following nucleic acids has a left handed helix
- (a) M-RNA                      (b) T-RNA  
(c) A-DNA                      (d) Z-DNA
8. Which ratio is constant of DNA
- (a)  $A + G/T + C$               (b)  $A + T/G + C$   
(c)  $A + C/U + G$               (d)  $A + U/G + C$
9. In clinical biochemistry lab, laboratory testing cycle consists of 3 phases : preanalytical, \_\_\_\_\_ and post analytical.
- (a) biochemical              (b) histological  
(c) analytical                  (d) none of these
10. Metabolic substances can be measured to evaluate organ function, Blood, Urea, Nitrogen (BUN) level is the indicator for which organ affected
- (a) Liver                          (b) Pancreas  
(c) Kidney                        (d) Heart

11. (a) Describe the structure and functions of disaccharides.

Or

- (b) Brief note on mucopolysaccharides.

12. (a) Describe the properties, functions of Triglycerols.

Or

- (b) Brief note on steroids.

13. (a) Explain the detailed classification of amino acid.

Or

- (b) Explain the brief note on co-enzymes.

14. (a) Write the structure of Nucleotides.

Or

- (b) Explain the different forms of DNA.

15. (a) Brief note on quality control methods of clinical biochemistry laboratory.

Or

- (b) How will you collect cerebrospinal fluid and explain its processing in the laboratory?

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)  
Each answer should not exceed 600 words.

16. (a) Explain the structure and biological importance of heteropolysaccharides.

Or

- (b) Explain the properties of Monosaccharides.

17. (a) Brief note on the detailed classification of lipids.

Or

- (b) Describe the types of Fatty acids.

18. (a) Describe the structure and properties of proteins.

Or

- (b) Brief note on Michaelis-Menten hypothesis.

19. (a) How will you collect the blood sample and explain its preservation methods.

Or

- (b) Describe the methods in Autoanalysis of clinical biochemistry laboratory.

20. (a) Briefly explain the structure and function of RNA.

Or

- (b) Brief note on DNA structure and functions.