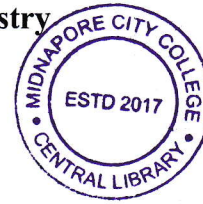


**The West Bengal University of Health Sciences**  
**B.Sc. in Medical Microbiology 2nd Semester December, 2022**  
**Examination**

**Subject : Basics of Biochemistry**

**Time : 2 hrs.**

**Full Marks : 50**



*Attempt all questions*

1. Choose the correct answer :

10 x 1

- a) Example of heteropolysaccharide is :  
 i) Starch.      ii) Glycogen.      iii) Hyaluronic acid.      iv) Cellulose.
- b) Which is the example of iron storage protein?  
 i) Albumin.      ii) Fibrinogen.      iii) Hemocyanin.      iv) Ferritin.
- c) Example of nucleotide is :  
 i) Adenosine.      ii) Guanosine.      iii) AMP.      iv) Cytidine.
- d) PTH causes :  
 i) Decrease in blood calcium level.      ii) Increase in blood calcium level.  
 iii) Slightly decrease in blood calcium.      iv) Increase iron level in blood.
- e) Name the  $\alpha$ 2-globulin :  
 i) Transferrin.      ii)  $\beta$ -Lipoproteins.      iii)  $\alpha$ 1-antitrypsin.      iv)  $\alpha$ 2-Macroglobulin.
- f) Night blindness is caused due to deficiency of :  
 i) Vitamin D.      ii) Vitamin B1.      iii) Vitamin A.      iv) Vitamin B3.
- g) Name the Sphingophospholipid :  
 i) Lecithin.      ii) Cephalin.  
 iii) Sphingomyelin.      iv) Sphingosine.
- h) LDL is called :  
 i) Good cholesterol.      ii) Bad cholesterol.  
 iii) Very good cholesterol.      iv) Useful cholesterol.
- i) The substrate concentration at which the reaction reaches half of its maximum velocity is called :  
 i)  $V_{max}$ .      ii)  $[S]$ .      iii)  $K_m$ .      iv)  $V_0$ .
- j) The base which is absent in RNA is :  
 i) Adenine.      ii) Cytosine.      iii) Thymine.      iv) Guanine.

2. Answer **any four** of the following questions :

4 x 2

- a) What is Hemosiderosis?
- b) Mention two differences between saturated and unsaturated fatty acid.
- c) Mention the functions of vitamin B12.
- d) Write down any two properties of enzyme.
- e) What is protein folding?
- f) Mention any two general reactions of amino acids.

3. Answer **any four** of the following questions.

4 x 4

- a) Write a short note on Anomerism.
- b) Describe the structure of plasma lipoprotein.
- c) Discuss the enzyme classification.
- d) Describe the structure of  $\alpha$ -helix.
- e) Discuss the factors promoting calcium absorption.
- f) Write down the sources and functions of vitamin B12.

4. Answer **any two** of the following questions:

- a) What is Megaloblastic anemia? Mention the sources and functions of vitamin B9. 2+6
- b) Write down the differences between A, B and Z DNA. Mention the types of RNA. 5+3
- c) What is Hyponatremia? Write down the clinical significance of low level of serum sodium. Mention three biochemical functions of sodium. 1+4+3