MSc DEGREE EXAMINATION MAY 2026

(Second Semester)

Branch - **CLINICAL NUTRITION AND DIETETICS**

CLINICAL BIOCHEMISTRY

Time: Three Hours | Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following factors can denature an enzyme and permanently reduce its activity? (i) Optimal temperature (ii) High temperature (iii) Presence of substrate (iv) Moderate pH	K1	CO1
	2	Show the location of glycolysis in a cell (i) Cytoplasm (ii) Mitochondrial matrix (iii) Nucleus (iv) Endoplasmic reticulum	K2	CO1
2	3	Where does fatty acid biosynthesis primarily occur in eukaryotic cells? (i) Mitochondrial matrix (ii) Cytoplasm (iii) Nucleus (iv) Golgi apparatus	K1	CO2
	4	Infer the lipoprotein that is commonly referred to as good cholesterol. (i) LDL (ii) VLDL (iii) HDL (iv) IDL	K2	CO2
3	5	Name the situation that is most likely to be observed in Negative nitrogen balance. (i) Pregnancy (ii) Recovery from illness (iii) Adequate protein intake (iv) Protein deficiency	K1	CO3
	6	Relate the hormone that plays a key role in regulating sodium and potassium balance in the body. (i) Insulin (ii) Aldosterone (iii) Thyroxine (iv) Glucagon	K2	CO3
4	7	Which of the following components is NOT present in a DNA nucleotide? (i) Deoxyribose sugar (ii) Phosphate group (iii) Nitrogenous base (iv) Ribose sugar	K1	CO4
	8	Show the commonly used as a vector in gene therapy. (i) Bacteria (ii) Viruses (iii) Fungi (iv) Protozoa	K2	CO4
5	9	Which of the following enzymes is most commonly elevated in hepatocellular damage? (i) Alkaline phosphatase (ii) Alanine aminotransferase (iii) Amylase (iv) Creatinine	K1	CO5
	10	Infer the test that is commonly used to record the electrical activity of the heart. (i) Echocardiography (ii) Electrocardiogram (iii) Angiography (iv) Stress test	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Recall the classification of enzymes.	K1	CO2
		(OR)		
	11.b.	Tell the pathway of glycogen synthesis.		
2	12.a.	Organize the biosynthesis of lecithin and cephalin.	K3	CO3
		(OR)		
	12.b.	Make use of biosynthesis of bile acids.		
3	13.a.	Contrast the amino acid pool.	K4	CO3
		(OR)		
	13.b.	Make use of metabolism in starvation.		
4	14.a.	Explain the features of Genetic code.	K5	CO4
		(OR)		
	14.b.	Evaluate applications of genetic engineering.		
5	15.a.	Deduct the role of C-reactive protein in cardiovascular disease.	K5	CO5
		(OR)		
	15.b.	Explain the clinical uses of oncogenic markers.		

SECTION -C (30 Marks)

Answer **ANY THREE** questions

ALL questions carry **EQUAL** Marks (3 × 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	How enzymes are used for clinical diagnosis?	K1	CO2
2	17	Make use of classification of plasma lipoproteins and its functions.	K3	CO3
3	18	Examine the sequence of Electron transport chain.	K4	CO4
4	19	Explain the transcription of genetic information.	K5	CO4
5	20	Interpret the various Liver function tests.	K5	CO5

Z-Z-Z

END