

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2024  
(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 among the following is essential for converting glucose to glycogen in Liver? a) Lactic acid                      b) GTP c) CTP                                      d) UTP	K1	CO1
	2	Dehydrogenases involved in HMP shunt are specific for _____. a) NADP <sup>+</sup> b) NAD <sup>+</sup> c) FAD    d) FMN	K2	CO1
2	3	Identify the pathway that requires NADPH as a factors _____. a) Fatty acid Oxidation b) Extra mitochondrial de novo fatty acid synthesis c) Ketone bodies formation d) Glycogenesis	K1	CO2
	4	Choose the rate limiting step in cholesterol biosynthesis. a) Squalene synthetase b) Mevalonate kinase c) HMG-CoA reductase d) HMG-CoA synthetase	K2	CO2
3	5	In primary dehydration, ECF becomes _____. a) Isotonic                                      b) Hypotonic c) Hypertonic                                      d) None of the above	K1	CO3
	6	In oxidative phosphorylation, one molecule of reduced flavoproteins produces how many ATPs? a) 0                      b) 1                      c) 2                      d) 3	K2	CO3
4	7	Translation results in the formation of _____. a) Protein Molecule                      b) DNA c) m-RNA                                      d) T-RNA	K1	CO4
	8	Identify a medical approach that treats or prevents disease by correcting the underlying genetic problem. a) Genetic code                                      b) Gene therapy c) Mutation    d) Genetic manipulation	K2	CO4
5	9	Hypothyroidism is characteristically associated with high serum of _____. a) Glucose                                      b) Phosphate c) Calcium    d) Cholesterol	K1	CO5
	10	When jaundice results from hepatitis, the un conjugated fraction of total serum bilirubin is usually _____. a) Atleast 50%                                      b) Less than 50% c) 50 to 85%    d) 85 to 90%	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.	Explain about the Glycogen storage diseases.	K4	CO1
	(OR)			
	11.b.	Examine the uses of enzymes in clinical diagnosis.		
2	12.a.	Classify plasma lipoproteins & explain its functions.	K4	CO2
	(OR)			
	12.b.	Explain the metabolism of ketone bodies.		
3	13.a.	Evaluate about acid-base balance in our body.	K5	CO3
	(OR)			
	13.b.	Discuss about oxidative phosphorylation.		
4	14.a.	Sketch the structure of DNA.	K6	CO4
	(OR)			
	14.b.	Examine the diseases of genetic origin.		
5	15.a.	Interpret any two tests used to estimate the gastric functions.	K5	CO5
	(OR)			
	15.b.	Assess the therapeutic uses of radio isotopes.		

**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	Elaborate the process of TCA cycle.	K5	CO1
2	17	Discuss the biosynthesis of cholesterol.	K6	CO2
3	18	Determine about the blood buffering system.	K5	CO3
4	19	Elaborate about the biosynthesis of protein.	K6	CO4
5	20	Predict the biochemical tests used to diagnose the liver function.	K6	CO5