22CNP208N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION MAY 2025
(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	How many molecules of ATP were generated at the end of glucose oxidation under aerobic condition? a) 40 b)38 c) 02 d) 36	K1	CO2
	2	_____ enzyme is responsible to catalyze exchange of amino and keto group between amino and keto acids. a) Kinases b) Oxygenases c) Aminotransferases d) Dehydrogenases	K2	CO3
2	3	The process of turning liquid oil into solid fat is known as _____. a) Rancidity b) Saponification c) Hydrolysis d) Hydrogenation	K1	CO1
	4	Which enzyme is responsible to catalyze a thiolytic cleavage and gives acetyl CoA and acyl CoA? a) Acyl CoA dehydrogenase b) B-hydroxy acyl CoA dehydrogenase c) Acetyl CoA acyltransferase (thiolase) d) Enoyl CoA hydratase	K2	CO2
3	5	Three dimensional arrangements of various atoms of the protein molecules are known as_____. a) Primary structure b) Tertiary structure c) Secondary structure d) Quaternary structure	K1	CO1
	6	The metabolism of sodium is regulated by the _____ hormone. a) Insulin b) Aldosterone c) PTH d) Somatostatin	K2	CO4
4	7	_____ enzyme separate the two strands of DNA during replication. a) Gyrase b) Topoisomerase c) Helicase d) DNA polymerase	K1	CO2
	8	Nucleic acids are a polymer of nucleotide monomeric units. Each nucleotide consists of _____. a) Base-sugar-OH b) Sugar-phosphate c) Base-sugar-phosphate d) Base- sugar	K2	CO1
5	9	Grave's disease is due to _____ a) Hyperactivity of adrenal cortex b) Hyperactivity of thyroid gland c) Hyperactivity of adrenal gland d) Hypoactivity of thyroid gland	K1	CO1
	10	Liver cirrhosis is mainly diagnosed by _____ a) Blood test b) Physical examination c) Liver biopsy d) SGOT	K2	CO1

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.	Classify enzymes.	K4	CO2
		(OR)		
	11.b.	Outline the process of TCA cycle.		
2	12.a.	How will beta oxidation of fatty acid occur in the body?	K3	CO4
		(OR)		
	12.b.	List out the functions of plasma lipoprotein.		
3	13.a.	Summarize on acid base balance.	K4	CO3
		(OR)		
	13.b.	Illustrate urea formation with suitable diagram with its significance.		
4	14.a.	Demonstrate on protein biosynthesis.	K3	CO4
		(OR)		
	14.b.	Define gene therapy. Explain the approaches to gene therapy.		
5	15.a.	Discuss in detail on liver function tests.	K3	CO1
		(OR)		
	15.b.	Explain the following tests (i) ECG; (ii) ECHO, (iii) MRI		

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	Explain the process of glycolysis.	K3	CO4
2	17	Discuss the following (i) biosynthesis of fatty acids; (ii) metabolism of ketone bodies.	K4	CO2
3	18	Elaborate on electron transport chain.	K4	CO2
4	19	List the steps involved in DNA replication with its explanation.	K3	CO3
5	20	Elaborate on thyroid function test.	K3	CO5

Z-Z-Z END