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22NDU416

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(Fourth Semester)

Branch - **NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS**

BIO CHEMISTRY

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 is a tricarboxylic acid? a) Acetic acid b) Succinic acid c) Oxaloacetic acid d) Citric acid	K1	CO1
	2	An Essential for the Conversion of Glucose to Glycogen in Liver is - a) UTP b) GTP c) Pyruvate kinase d) Guanosine	K2	CO1
2	3	This molecule acts as molecular chaperones to assist the folding of proteins a) Vitamins b) Carbohydrates c) Amides d) Lipids	K1	CO2
	4	Which of these is not a lipid? a) Fats b) Oils c) Proteins d) Waxes	K2	CO2
3	5	Proteins are absorbed from GIT as a) Amino acids b) Peptides c) peptones d) All of the above	K1	CO3
	6	Ammonia in the brain is converted into a) Urea b) Glutamine c) Glutamic acid d) Creatinine	K2	CO3
4	7	Which of the following is useful in nucleic acid (NA) analysis? a) Molecular weight of the nucleic acids b) Absorption of UV light c) Absorption of visible light d) None of the above	K1	CO4
	8	In DNA strand the nucleotides are linked together by a) Glycosidic bonds b) Phosphodiester bonds c)peptide bonds d)More than one of the above	K2	CO4
5	9	Which of the following vitamins is required for fatty acid b-oxidation? a) Biotin b) Niacin c) Riboflavin d) Thiamin	K1	CO5
	10	Which of the following vitamins is involved in transamination of amino acids? a) Vitamin B6 b) Niacin c) Riboflavin d) Thiamin	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 the glycolysis.	K2	CO1
		(OR)		
	11.b.	Explain about the glycogenolysis.		
2	12.a.	Select the catabolism of cholesterol.	K3	CO2
		(OR)		
	12.b.	Identify the structure of lecithin.		
3	13.a.	Distinguish the chemical properties of amino acids.	K4	CO3
		(OR)		
	13.b.	Contrast the transportation of ammonia.		
4	14.a.	Discover the structure and function of ATP.	K4	CO4
		(OR)		
	14.b.	Categorize the hemoglobin synthesis.		
5	15.a.	Assess the paper chromatography.	K5	CO5
		(OR)		
	15.b.	Evaluate the Role of B vitamins in the metabolism of proteins.		

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	Categorize the structure and properties of polysaccharides.	K4	CO1
2	17	Contrast the Biosynthesis and catabolism of cholesterol.	K4	CO2
3	18	Criticize the classification of protein based on composition and solubility.	K5	CO3
4	19	Appraise the structure and functions of ATP.	K5	CO4
5	20	Formulate the Michaelis Menton equation.	K6	CO5

Z-Z-Z END