

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Fourth Semester)

Branch – NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS

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 is a disaccharide? a) Glucose b) Sucrose c) Fructose d) Galactose	K1	CO1
	2	The end product of glycolysis is: a) Glucose b) Pyruvate c) Lactate d) Acetyl-CoA	K2	CO3
2	3	The primary product of fatty acid oxidation is: a) Acetyl-CoA b) Lactate c) Glycerol d) NADH	K1	CO3
	4	Oxidative phosphorylation occurs in: a) Cytoplasm b) Mitochondrial inner membrane c) Nucleus d) Golgi apparatus	K2	CO2
3	5	Which of the following is the end product of deamination of amino acids? a) Urea b) Ammonia c) Uric Acid d) Creatinine	K1	CO3
	6	The process of protein synthesis is called: a) Replication b) Translation c) Transcription d) Mutation	K2	CO4
4	7	Which nitrogenous base is present only in RNA but not in DNA? a) Thymine b) Uracil c) Cytosine d) Adenine	K1	CO1
	8	Which of the following is the genetic material in most living organisms? a) Protein b) DNA c) Lipid d) Carbohydrate	K2	CO1
5	9	Enzymes are mainly made up of: a) Carbohydrates b) Proteins c) Lipids d) Vitamins	K1	CO5
	10	Which vitamin acts as a coenzyme in carbohydrate metabolism? a) Vitamin A b) Vitamin B1 (Thiamine) c) Vitamin D d) Vitamin K	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 TCA cycle with schematic representation.	K2	CO3
		(OR)		
	11.b.	Write a note on HMP shunt.		
2	12.a.	Examine the oxidation of saturated fatty acids.	K4	CO3
		(OR)		
	12.b.	Classify lipoprotein.		
3	13.a.	Explain urea cycle.	K2	CO3
		(OR)		CO1
	13.b.	Summarize physical and chemical properties of amino acids.		
4	14.a.	Show the structure and functions of ATP.	K2	CO2
		(OR)		CO4
	14.b.	How hemoglobin is synthesized and catabolized in the body?		
5	15.a.	Construct Enzymatic action and mention the factors influencing rate of enzyme action.	K3	CO5
		(OR)		
	15.b.	Choose the principles of paper chromatography.		

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	Illustrate the Interrelationship between fat, carbohydrate and protein metabolism.	K5	CO2
2	17	Analyze the biosynthesis and catabolism of cholesterol.	K4	CO4
3	18	Elaborate on protein biosynthesis.	K6	CO4
4	19	Describe the types, structure and functions of RNA.	K3	CO1
5	20	Interpret the co-enzymic role of vitamin B in metabolism of carbohydrates, protein and fat.	K5	CO5

Z-Z-Z END