

# **PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)**

**MSc DEGREE EXAMINATION DECEMBER 2025**  
**(First Semester)**

## Branch - FOODS AND NUTRITION

## **ADVANCED NUTRITION - I**

Time: Three Hours

Maximum: 75 Marks

### SECTION-A (10 Marks)

**Answer ALL questions**

**ALL** questions carry **EQUAL** marks

$$(10 \times 1 = 10)$$

**Cont...**

**SECTION - B (35 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Explain the concept of nutrient balance and its importance in animal nutrition.  (OR)	K2	CO1
	11.b.	Why is electrolyte balance crucial for cellular function?		
2	12.a.	Differentiate between simple and complex carbohydrates with examples.  (OR)	K3	CO2
	12.b.	What is gluconeogenesis? Name three precursors and its primary site.		
3	13.a.	What is the role of chylomicrons in lipid transport?  (OR)	K4	CO3
	13.b.	Why is HDL called "good cholesterol"? Explain it.		
4	14.a.	Describe the role of skeletal muscle in amino acid metabolism during fasting.  (OR)	K4	CO4
	14.b.	Define protein turnover. Why is it essential for cellular homeostasis?		
5	15.a.	Define Total Energy Expenditure (TEE) and list its major components.  (OR)	K5	CO5
	15.b.	What is the thermic effect of food and how does it contribute to energy expenditure?		

**SECTION - C (30 Marks)**

Answer ANY THREE questions

ALL questions carry EQUAL Marks

(3 x 10 = 30)

Module No.	Question No.	Question	K Level	CO
1	16	Compare and contrast the roles of catalytic, transport, and receptor proteins in cellular nutrition.	K4	CO1
2	17	Discuss the regulation of blood glucose levels. Explain the roles of insulin, glucagon, and key organs involved.	K4	CO2
3	18	Describe digestion, absorption, and transport of dietary lipids in the human body.	K5	CO3
4	19	Explain the process of protein synthesis, including transcription and translation.	K5	CO4
5	20	Explain the hormonal and genetic factors influencing body composition and energy equilibrium.	K6	CO5

Z-Z-Z END