

MSc DEGREE EXAMINATION MAY 2026
(Second Semester)

Branch – **FOODS AND NUTRITION**

PHYSIOLOGICAL ASPECTS OF NUTRITION

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	A patient with chronic pancreatitis and steatorrhea most likely has a defect of which digestive enzymes (i) Reduced pancreatic lipase secretion (ii) Decreased salivary amylase activity (iii) Less pepsin activity (iv) Low bile salt secretion	K1	CO1
	2	Identify the role of antioxidants in preventing cellular damage (i) Enhancing free radical production (ii) Donating electrons to stabilize free radicals (iii) Increasing lipid peroxidation (iv) Promoting oxidative stress	K2	CO1
2	3	Choose the type of lingual papillae primarily contains taste buds responsible for gustatory sensation (i) Filiform papillae (ii) Fungiform papillae (iii) Circumvallate papillae (iv) Foliate papillae	K1	CO2
	4	Define Circadian rhythm (i) Repeated biological fluctuations (ii) Biological cycles occurring over 12-hours (iii) Biological cycles of around 24-hours (iv) Reflex responses to environmental stimuli	K2	CO2
3	5	Hypersecretion of parathyroid hormone most commonly results in which of the following conditions? (i) Hypocalcemia (ii) Hypercalcemia (iii) Hypophosphatemia only (iv) Increased bone density	K1	CO3
	6	Which hormone is secreted by the adrenal medulla and is involved in the “fight or flight” response? (i) Cortisol (ii) Aldosterone (iii) Androgen (iv) Epinephrine	K2	CO3
4	7	Choose the leukocyte primarily responsible for antibody production (i) B lymphocytes (ii) T lymphocytes (iii) Neutrophils (iv) Eosinophils	K1	CO4
	8	Which immunoglobulin is primarily responsible for mucosal immunity? (i) IgG (ii) IgA (iii) IgM (iv) IgE	K2	CO4
5	9	Select the nutrient deficiency which results from prolonged use of broad-spectrum antibiotics (i) Vitamin A (ii) Vitamin C (iii) Vitamin D (iv) Vitamin K	K1	CO5
	10	Which class of drugs is commonly associated with depletion of coenzyme Q10, affecting energy metabolism? (i) Hypolipidemic agents (ii) Antibiotics (iii) Anti-inflammatory drugs (iv) Oral hypoglycemic drugs	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.	Infer the role of major gastrointestinal enzymes in digestive juices.	K2	CO1
	(OR)			
	11.b.	Outline the defense mechanism of antioxidants against free radicals.		
2	12.a.	Explain the physiology of olfaction and disorders of smell.	K3	CO2
	(OR)			
	12.b.	Describe the physiology of hunger and satiety.		
3	13.a.	Examine the mode of action of thyroid hormones.	K4	CO3
	(OR)			
	13.b.	List the endocrine functions and disorders of pancreas.		
4	14.a.	Explain the characteristics and composition of lymph.	K5	CO4
	(OR)			
	14.b.	Interpret the causes and types of hypersensitivity.		
5	15.a.	Elaborate the physiological action of drugs in the body.	K6	CO5
	(OR)			
	15.b.	Discuss the general mechanisms of drug–nutrient interactions with an example.		

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 functions and clinical significance of gastrointestinal hormones.	K2	CO1
2	17	Examine the concept of circadian rhythm in blood metabolism and kidney function.	K3	CO2
3	18	Classify hormones based on their chemical nature with suitable examples.	K4	CO3
4	19	Compare the mechanisms of natural and acquired immunity with suitable examples.	K5	CO4
5	20	Explain drug-induced malnutrition. Discuss the impact of antibiotics and anti-inflammatory agents on nutritional status.	K6	CO5

Z-Z-Z

END