23FPB533N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 2025
(Fifth Semester)

Branch- **FOOD PROCESSING TECHNOLOGY**

PRINCIPLES OF NUTRITION

Time: Three Hours Maximum: 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks (10 × 1 = 10)

Question No.	Question	K Level	CO
1	The physiological fuel value of carbohydrates is approximately a) 4 kcal/g b) 7 kcal/g c) 9 kcal/g d) 2 kcal/g	K1	CO1
2	Infer Which of the following is *not* a component of total energy expenditure? a) Basal metabolic rate (BMR) b) Thermic effect of food (TEF) c) Physical activity d) Body water content	K2	CO1
3	Which of the following is a rich source of polyunsaturated fatty acids? a) Butter b) Coconut oil c) Groundnut oil d) Sunflower oil	K1	CO2
4	Essential fatty acids are important because they a) Provide energy only b) Are synthesized by the human body c) Help in brain development and regulation of inflammation d) Increase cholesterol synthesis	K2	CO2
5	What is the impact of Vitamin B3 deficiency? a) Night blindness b) Pellagra c) Anemia d) Glossitis	K1	CO3
6	Show why Vitamin C is mainly required for: a) Blood clotting b) Calcium absorption c) Collagen formation and wound healing d) Nerve impulse transmission	K2	CO3
7	Deficiency of iodine leads to which among the following? a) Anemia b) goiter c) Night blindness d) Rickets	K1	CO4
8	Infer the main role of zinc among the following a) Vision and immune function b) Blood clotting c) Muscle contraction d) Energy production	K2	CO4
9	The antidiuretic hormone (ADH) plays a key role in which of the following? a) Increasing appetite b) Regulating water balance by controlling urine output c) Enhancing oxygen transport d) Increasing calcium absorption	K1	CO5
10	The acid-base balance in the body is mainly maintained by_____. a) Bicarbonate buffer system, lungs, and kidneys b) Vitamin C and D c) Adrenal glands d) Hormones and enzymes only	K2	CO5

Cont...

SECTION - B (35 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 × 7 = 35)

Question No.	Question	K Level	CO
11.a.	Explain the concept of optimum nutrition and malnutrition.	K2	CO1
	(OR)		
11.b.	Outline on dietary fibre — its classification, sources, and functions.		
12.a.	Identify the major sources and functions of proteins in the human body.	K3	CO2
	(OR)		
12.b.	Construct the way in which fats are digested and absorbed in our body.		
13.a.	Highlight the source and role of vitamin K.	K3	CO3
	(OR)		
13.b.	Construct the effects of thiamine deficiency.		
14.a.	Examine the effects of IDD.	K4	CO4
	(OR)		
14.b.	Survey the functions of Phosphorous.		
15.a.	List and explain the functions of water in the human body.	K4	CO5
	(OR)		
15.b.	Categorize the major electrolytes in the body and examine their functions.		

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	Analyse about physiological fuel value and the factors affecting Basal Metabolic Rate (BMR).	K4	CO1
2	17	Conclude in detail the digestion, absorption, and utilization of dietary proteins. List the daily protein requirements and its biological importance.	K4	CO2
3	18	Express the functions and effects of folic acid deficiency.	K4	CO3
4	19	Elucidate the role of iron in our body and suggest the sources of iron rich foods.	K4	CO4
5	20	Examine the regulation of water balance and effects of water imbalance.	K4	CO5

Z-Z-Z END