

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSC DEGREE EXAMINATIO DECEMBER 2024  
(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 × 1 = 10)

Module No.	Question No.	Question	K Level	CO
1	1	In intracellular compartment the fluid present in ml/kg of body weight is about A) 120                      B) 220 C) 270                      D) 330	K1	CO1
	2	What is the sequence in which organic compounds are used by the body during prolonged fasting? A) Carbohydrates, Protein and Lipids B) Carbohydrates, Lipids and Protein C) Protein, Lipids and Carbohydrate D) Fat, Carbohydrate and Protein	K2	CO5
2	3	Which of the following enzyme is involved in the rate-limiting step of glycolysis? A) Enolase B) Phosphofructokinase C) Phosphohexose isomerase D) Glyceraldehyde-3-phosphate dehydrogenase	K1	CO5
	4	What type of bond links monosaccharides together in polysaccharides? A) Peptide bond B) Hydrogen bond C) Glycosidic bond D) Ionic bond	K2	CO1
3	5	Which of the following pathway is not used for triacylglycerol synthesis? A) Glycerol 3-phosphate pathway B) Glyoxylate pathway C) Monoacyl glycerol pathway D) Ennedy pathway	K1	CO1
	6	What is the outcome of the accumulation of acetyl-coA in mitochondria of the liver? A) It is used as an energy source B) It has broken down into free fatty acids C) It gets Converted to oxaloacetate D) It forms ketone bodies	K2	CO5
4	7	All of the following amino acids are donors of one carbon compounds except A) Histidine              B) Tyrosine C) Tryptophan            D) Serine	K1	CO1
	8	The repeating units of proteins are A) Glucose units        B) Amino acids C) Fatty acids            D) Peptides	K2	CO5
5	9	How much is the respiratory quotient of mixed diets? A) 0.70    B) 0.75    C) 0.80    D) 0.85	K1	CO1
	10	Find the primary fuel for the brain and red blood cells? A) Glucose                      B) Chylomicron C) Sucrose                      D) Maltose	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.	Energy plays several roles in our life style process. Justify the statement.	K2	CO1
	(OR)			
	11.b.	Explain transport protein and catalytic protein.		
2	12.a.	Analyze hexosemonophosphate shunt.	K4	CO2
	(OR)			
	12.b.	Examine the regulatory effects of NADH: NAD ratio.		
3	13.a.	Select the Role of lipoprotein in transport of Lipids.	K3	CO3
	(OR)			
	13.b.	Summarize the synthesis of fatty acid.		
4	14.a.	Assess the role of kidney and brain in amino acid metabolism.	K5	CO4
	(OR)			
	14.b.	Protein synthesis is varied from DNA replication-Justify it.		
5	15.a.	Explain how does fat availability affect carbohydrate metabolism?	K2	CO5
	(OR)			
	15.b.	Demonstrate the role of endocrine during exercise.		

**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	Examine the structure of digestive tract and Explain the regulations of the digestion process.	K4	CO2
2	17	Choose the physiological and metabolic effects of fibers.	K5	CO4
3	18	Explain the regulation of lipid metabolism.	K2	CO5
4	19	Analyze the structural organization of protein.	K4	CO2
5	20	Illustrate the energy expenditure components.	K2	CO5

Z-Z-Z      END

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSC DEGREE EXAMINATIO DECEMBER 2024  
(First Semester)

Branch - FOODS AND NUTRITION

**NUTRITION THROUGH LIFECYCLE**

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	What type of fat promote a high estrogen a)Estrogen                      b)Placenta c)Gynicoid                      d)Hormones	K1	CO5
	2	Thiamin RDA for an adult women. Who is a heavy worker? a)1.0mg                      b)1.2mg c)1.5mg                      d)2.0mg	K2	CO1
2	3	Which hormone is responsible for lactation? a)Oxytocin    b)Estrogen c)Aldosterone                      d)Adrenalin	K1	CO1
	4	Which nutrient is often given to infant at birth? a)Iron                      b)Vitamin-k c)Protein                      d)Vitamin-c	K2	CO1
3	5	Find the symptom of kwashiorkor. a)Anemia                      b)Bones health c)Dermatosis                      d)Teeth health	K1	CO5
	6	Which age Group is affecting due to pica disorder? a)1-5 years                      b)1-2 years c)2-4 years                      d)3-5 years	K2	CO5
4	7	Select the eating disorder of adolescents. a)Fatigue                      b)Constipation c)Bulimia                      d)Sickness	K1	CO5
	8	What is sarcopenia? a)Loss of appetite                      b)Anorexia c) Loss of muscle                      d)Spoon shape nail.	K2	CO1
5	9	Tell the health related physical fitness component. a)Agillity and speed b)Balance and coordination c)Power and speed	K1	CO4
	10	Which of the following activity improves an aerobic endurance? a)Stretching                      b)Weightlifting c)Swimming                      d)Archery	K2	CO4

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.	Classify the stages of pregnancy.	K2	CO3
		(OR)		
	11.b.	Outline the risk factors for poor pregnancy outcome during teenage pregnancy.		
2	12.a.	Examine the development and function of breast.	K3	CO5
		(OR)		
	12.b.	Compare weaning food with commercially prepared baby foods.		
3	13.a.	Construct the factors considered while planning of diet for a preschool child.	K3	CO5
		(OR)		
	13.b.	Identify the nutritional of requirements during school age.		
4	14.a.	Assume the growth and development of adolescents.	K4	CO2
		(OR)		
	14.b.	Analyze common health problem in old age.		
5	15.a.	Examine the nutritional requirements for sports man.	K5	CO4
		(OR)		
	15.b.	Classify the types of exercise.		

**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	Examine the complications of pregnancy.	K4	CO1
2	17	Analyze the physiology and psychology of lactation.	K4	CO1
3	18	Assess the nutrition and Growth pattern in school age children.	K5	CO1
4	19	Choose the physiological and psychological factors affecting food intake of elderly person.	K5	CO3
5	20	Test the Glucose homeostasis during and after exercise.	K6	CO4

Z-Z-Z

END

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)  
MSC DEGREE EXAMINATION DECEMBER 2024  
(First Semester)

Branch - FOODS AND NUTRITION

FOOD PROCESSING TECHNOLOGY

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 Leve	CO
1	1	What affects the milling potential of rice? a) contact time and quality b) efficiency and quantity c) milled rice recovery and quality d) quantity and milled rice recovery	K1	CO1
	2	What is the role of aspirators? a) To remove husks      b) To remove bran c) To remove germ      d) To remove endosperm	K2	CO2
2	3	Which of the following step is not included in the pulse milling? a) Loosening of husk      b) Parboiling c) Dehusking      d) Splitting of pulses	K1	CO1
	4	Which of the following is true about seed flaking in pre-press solvent extraction? a) The flakes have to be very thin b) The flakes have to be very thick c) The flakes have to be an optimum size neither too thick or too thin d) None of the mentioned	K2	CO1
3	5	Heating of canned foods can be done a) In a boiling water bath      b) Using a steamer c) In oven heat      d) All the above	K1	CO1
	6	Find the nutrient rich in chocolate. a) Protein      b) Fat c) Carbohydrates      d) Vitamin	K2	CO1
4	7	What is the index organism to find the efficiency of pasteurization? a) Clostridium botulinum b) Mycobacterium tuberculosis c) Salmonella typhi d) Lactic acid bacteria	K1	CO2
	8	Mycelium produces white or colored umbrella shaped fruiting bodies called a) Haploae      b) Basidiocarp c) heterotrophic fungus      d) annulus	K2	CO1
5	9	Who developed steam sterilizer? a) Louis Pasteur      b) Charles Chamberland c) Nicolas Appert      d) Clarence Birdseye	K1	CO2
	10	Expand HTST. a) High Temperature short Time      b) High Thermal short time c) Height Thermal short time      d) High Temperature shift time	K2	CO2

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**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.	Identify the advantages and disadvantages of parboiling process.	K3	CO4
	(OR)			
	11.b.	Choose the role of ingredients in making bread.		
2	12.a.	Build the difference between Traditional and modern method of processing.	K3	CO2
	(OR)			
	12.b.	Construct the nutritional importance of using fats and oils.		
3	13.a.	Discover canning process of Vegetable that is grown in your area.	K4	CO1
	(OR)			
	13.b.	Analyze the different edible creating for fruits.		
4	14.a.	Examine nutritional loss during processing.	K4	CO5
	(OR)			
	14.b.	Discover the methods of storage and preservation of fish.		
5	15.a.	Evaluate non thermal processing of Ultra sound and Ohmic Heating.	K5	CO3
	(OR)			
	15.b.	Assess the General functions of Spices.		

**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	Analyze about different types of wheat milling.	K4	CO3
2	17	Examine the factors affecting the milling of pulses.	K4	CO4
3	18	Determine the processing of fruits and vegetables using vacuum technology.	K5	CO3
4	19	Evaluate the different methods of Pasteurization.	K5	CO5
5	20	Distinguish the application of thermal and non-thermal processing in foods.	K4	CO3

Z-Z-Z

END

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**MSC DEGREE EXAMINATION DECEMBER 2024**  
(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	Pepsin functions as an active proteolytic enzyme in a -----medium a. Highly acidic    b. Highly alkali c. Lowacidic        d.Lowalkali	K1	CO1
	2	Gastrin is itself a hormone secreted by a. H- cells            b. ECL – cells c.G-cells              d. MLM cells	K2	CO1
2	3	It transduces sound only a. Tympanic membrane    b. Malleus c. Cochlea                      d. Colliculus	K1	CO2
	4	Psychophysiologic and neurophysiologic studies have identified possible chemical receptors in taste cells except a. Sodium receptor b. potassium receptors c. chloride receptor d. phosphorus receptors	K2	CO2
3	5	Its primary function is contraction of smooth muscle a. Calcitonin            b. Thyroxine c.Oxytocin                d. Insulin	K1	CO3
	6	Hypoactivity of adrenal cortex produces a. Addison's disease    b.Androstenedione c. Conn's syndrome    d.Motilin	K2	CO3
4	7	Immunoglobulins, a specialized group of proteins are mostly associated with----- of plasma proteins a. Alpha                      b. gamma c.Beta                         d.delta	K1	CO4
	8	These are the sites for the initiation of immune response except a. Spleen                      b. Tonsils c.Lymph                        d. Thymus	K2	CO4
5	9	----- is an important considerations in determining drug response. a.Body fat                      b. Body composition c. Body water                d. Body mass	K1	CO5
	10	It impairs the absorption of Vitamin B <sub>12</sub> a. Colchicine                b. Daraprim c.Azulfidine                 d.Bactrim	K2	CO5

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**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.	Define Free Radicals and Brief on Reactive Oxygen Species.	K2	CO1
		(OR)		
	11.b.	Summarize on Pepsinogen Secretion.		
2	12.a.	Explain the physiology of Olfaction.	K2	CO2
		(OR)		
	12.b.	What are circadian rhythms and why do they exist?		
3	13.a.	Explain about Growth Hormone actions.	K2	CO3
		(OR)		
	13.b.	Classify major active adrenal cortical steroids.		
4	14.a.	Interpret on properties of Antigens.	K2	CO4
		(OR)		
	14.b.	Infer about reaction mediated by immune complexes in Hypersensitivity.		
5	15.a.	Discuss on biotransformation.	K2	CO5
		(OR)		
	15.b.	Show the relationship between oral hypoglycemic drugs and diabetics.		

**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	Outline the cholecystokinin and secretin control of Gastric motility.	K2	CO1
2	17	Summarize on regulation of ADH secretion and control of thirst.	K2	CO2
3	18	Compare signs and symptoms of Hypothyroidism and Hyperthyroidism.	K2	CO3
4	19	Outline the five types of Immunoglobulin.	K2	CO4
5	20	Summarize on Risk Factors for Food-Drug interactions.	K2	CO5

Z-Z-Z

END



PSG COLLEGE OF ARTS & SCIENCE  
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MSC DEGREE EXAMINATIO DECEMBER 2024  
(Second Semester)

Branch - FOODS AND NUTRITION

**NUTRITION RESEARCH METHODS**

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	These studies are designed to quantify the intake and output of specific nutrients in order to understand how the body processes and utilizes these substances. a. Cohort                      b. Case- control c.experimental              d. metabolic balance	K1	CO1
	2	It produces psychological calming without physiological depression in animals when surgical procedures are undertaken. a. Transquiliser              b. Barbiturate c.Ketamine                      d. Atropine	K2	CO1
2	3	Find the following technique evaluates relative digestibility of protein. a.DC                              b.BV c.NDPV                          d.PER	K1	CO2
	4	Plant based sources have lower bioavailability of Zn because of the presence of a.Oxalates                      b.phytates c. Tanins                          d.lectins	K2	CO2
3	5	Whole wheat was found to be rich source of vitamin ----- while milled rice was observed to be poor source a. B1              b.B6              c.B2              d. B12	K1	CO3
	6	Cholesterol values are generated by GLC method in foods of animal origin , and the values are expressed as----- /100g food. a. Mol              b.mmol              c.mg              d.g	K2	CO3
4	7	Find the test that is used to determine an inadequate protein intake a. Serum TIBC                      b.urinary urea nitrogen c. blood urea nitrogen              d.Urinary index	K1	CO4
	8	A waist hip ratio greater than 1.0 in men increases the risk of a. Hypertension                      b. angina pectoris c.Myocardial infarction              d.atherosclerosis	K2	CO4
5	9	It is an important determinant of metabolic rate, physical function, and overall strength and endurance. a.Fat mass                      b. Lean body mass c.body water                      d. body volume	K1	CO5
	10	Name the element often used as a tracer in metabolic balance studies to track the fate of ingested nutrients within the body. a. Hydrogen                      b.Uronium c.Potassium                      d. carbon	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.	Distinguish between prospective and retrospective cohort studies.	K2	CO1
	(OR)			
	11.b.	Construct the factors that govern the choice of the animal species to be used.		
2	12.a.	Compare the advantages of BV and chemical score of protein.	K2	CO2
	(OR)			
	12.b.	Explain the applications of RIA.		
3	13.a.	Explain the origin of first FCT in India.	K2	CO3
	(OR)			
	13.b.	Show the preparation of analytical sample from sweetpotato for carbohydrate analysis.		
4	14.a.	Can you relate frame size and bodyweight of an adult man.	K2	CO4
	(OR)			
	14.b.	Summarize the biochemical tests used to assess water soluble vitamins status of individual.		
5	15.a.	Discuss on factors influencing muscle strength.	K2	CO5
	(OR)			
	15.b.	Differentiate between body mass and body volume.		

**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	Summarize the information available in Clinical Trial Registry – India (CTRI)	K2	CO1
2	17	Describe the bioavailability of Folic acid content of plant sources.	K2	CO2
3	18	Give an outline on uses of Food composition Data.	K2	CO3
4	19	Explain the important techniques of anthropometric measurements.	K2	CO4
5	20	Discuss on metabolic balance studies using Longitudinal design.	K2	CO5

Z-Z-Z

END



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

**MSc DEGREE EXAMINATION DECEMBER 2024  
(Third Semester)**

Branch – **FOODS AND NUTRITION**

**NUTRITIONAL 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 gene is the most commonly associated with familial forms of picks diseases? a) APP                      b) Tau                      c) SOD1                      d) Huntingtin	K1	CO1
	2	Show Tay-sachys a disease is caused by deficiency of which enzyme? a) Hexosaminidase A                      b) Lactase c) Amylase                      d) Acetylcholinestrace	K2	CO1
2	3	What percentage of total plasma protein does albumin constitute? a) 10 %                      b) 30 %                      c) 60 %                      d) 90 %	K1	CO2
	4	Select which plasma protein is synthesized in the liver and contributes significantly to oncotic pressure? a) Gamma globulin                      b) Albumin c) Fibrinogen                      d) Alpha 1 Anti trypsin	K2	CO2
3	5	Spell which of the primary test used to assess kidney function? a) Liver function test                      b) BUN c) Lipid profile                      d) CBC	K1	CO3
	6	Site the substance commonly measured in blood test to estimate kidney function. a) Uric acid                      b) Creatinine c) Bilirubin                      d) Cholesterol	K2	CO3
4	7	Choose the most sensitive test for detecting thyroid dysfunction. a) T3 test                      b) T4 test c) TSH test                      d) Reverse T3 test	K1	CO4
	8	Trace the level of TSH in primary hypothyroidism from the given options. a) Low                      b) High                      c) Normal                      d) Fluctuating	K2	CO4
5	9	Relate what is the name for the outer layer of adrenal gland called as? a) Medulla                      b) Cortex c) Hypothalamus                      d) Pituitary	K1	CO5
	10	Write which disorder is caused by insufficient production of adrenal hormones? a) Cushing's syndrome                      b) Addison syndrome c) Graves diseases                      d) Diabetes insipidus	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.	Extend the physiologic and metabolic effects of Insulin.	K2	CO1
	(OR)			
	11.b.	Outline the biochemical abnormalities and clinical manifestations of gauchers diseases.	K2	CO1
2	12.a.	Prepare short notes on functions of plasma proteins.	K3	CO2
	(OR)			
	12.b.	Compute the interpretation of the enzyme lactase dehydrogenase.	K3	CO2
3	13.a.	Explain Cirrhosis of Liver.	K3	CO3
	(OR)			
	13.b.	Construct a short passage on functions of Liver.	K3	CO3
4	14.a.	Examine the factors affecting thyroid concentration.	K4	CO4
	(OR)			
	14.b.	Comment on disorders of thyroid gland.	K4	CO4
5	15.a.	Infer on Cushing's Syndrome.	K4	CO5
	(OR)			
	15.b.	Illustrate on diabetes insipidus.	K4	CO5

**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 the factors affecting GTT.	K4	CO1
2	17	Simplify the types of plasma enzyme, their physiological and clinical significance of enzyme inhibition.	K4	CO2
3	18	Differentiate acute renal failure and chronic renal failure.	K4	CO3
4	19	Focus on biochemical changes, causes and clinical features of hypothyroidism.	K4	CO4
5	20	Connect the disorders of pituitary function elaborately.	K4	CO5

Z-Z-Z END



**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.	Outline the importance of enteral feeding in hospitalized patient.	K5	CO3
	(OR)			
	11.b.	Pen down the Nutrition Care Process.		
2	12.a.	Summarize the metabolic changes occur in burn patients.	K4	CO5
	(OR)			
	12.b.	Highlight the importance of nutrition intervention during cancer therapies.		
3	13.a.	Enlist the factors that damage liver functions.	K4	CO4
	(OR)			
	13.b.	Discuss Constipation as a disease of school going children.		
4	14.a.	Discuss the role of hormones in obesity.	K3	CO5
	(OR)			
	14.b.	State the effect of hypoglycemia and treatments undertaken.		
5	15.a.	Pen down the pathogenesis leading to cardio vascular disease.	K5	CO3
	(OR)			
	15.b.	Explain nephrolithiasis.		

**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	Compare and discuss about various disorders of carbohydrate metabolism.	K3	CO1
2	17	Elaborate on Arthritis and osteoarthritis.	K2	CO2
3	18	Enumerate the mechanism behind peptic ulcer prevention and factors that damage GI Mucosa.	K4	CO3
4	19	Detail on types, symptoms, risk factors, diagnostic methods and dietary treatments of diabetes.	K2	CO2
5	20	Distinguish the renal disorders nephritis and nephrosis in its symptoms, causes, dietary management.	K4	CO4

Z-Z-Z END



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

**MSC DEGREE EXAMINATIO DECEMBER 2024**  
(First Semester)

Branch - **FOODS AND NUTRITION**

## ADVANCED FOOD SCIENCE

Time: Three Hours

**Maximum: 75 Marks**

### **SECTION-A (10 Marks)**

**Answer ALL questions**

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

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

<b>Module No.</b>	<b>Question No.</b>	<b>Question</b>	<b>K Level</b>	<b>CO</b>
<b>1</b>	1	What is the most important soluble carbohydrates present in all cereals? a) Cellulose                                  b) Hemi cellulose c) Pentosans                                 d) Starch	K1	CO1
	2	Show the two-phase system in which a liquid is dispersed in a solid. a) Foam                      b) Sol                      c) Gel                      d) colloid	K2	CO1
<b>2</b>	3	Name the pigment that is held tightly within cells in the raw vegetable. a) Carotenoids                                  b) Anthocyanin c) Betalins                                        d) Lycopene	K1	CO2
	4	Show the nut contains naturally occurring antioxidant resveratrol. a) Cashew    b) Ground nut    c) Coconut    d) Almond	K2	CO2
<b>3</b>	5	Match the biological value of fish protein. a) 100                      b) 60                      c) 75                      d) 80	K1	CO3
	6	Identify the fresh chilled poultry should be stored loosely wrapped in the refrigerator. a) 3°c (38°F)                                  b) 2°c (36°F) c) 1°c (37°F)                                  d) 0°c (-18°F)	K2	CO3
<b>4</b>	7	Mention the smoking temperature of butter fat. a) 207° c    b) 208°c                      c) 205°c                      d) 206°c	K1	CO4
	8	Identify the sugar used in pudding to improve colour and flavour. a) Caramel sugar                                  b) Jaggery c) Honey    d) Sugar syrup	K2	CO4
<b>5</b>	9	Which method is done by tasting coffee or tea or fruit juice? a) Slurping    b) Smelling c) Consistency                                        d) Texture	K1	CO5
	10	Mention the ingredient reduces the sourness of acid and bitterness of coffee. a) Honey    b) Sugar    c) Dates syrup    d) Jaggery	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 functions of emulsifiers with some common food emulsions.	K2	CO1
	(OR)			
	11.b.	Interpret the types and baking quality of flour.		
2	12.a.	Identify the physico chemical changes of fruits during ripening.	K3	CO2
	(OR)			
	12.b.	Select the role of spices and condiments in Indian cookery.		
3	13.a.	Examine the functional properties of egg.	K4	CO3
	(OR)			
	13.b.	Assess the tenderness and tenderizers of meat.		
4	14.a.	Explain the composition of milk.	K5	CO4
	(OR)			
	14.b.	Evaluate the properties of different types of sugars.		
5	15.a.	Formulate a novel refreshing cool drink using berries as star ingredient.	K6	CO5
	(OR)			
	15.b.	Traditional cooking methods helps to retain the nutrients compare to modern cooking methods. Justify.		

**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	Explain the uses of starch in food preparations.	K2	CO1
2	17	Identify the toxic constituents and its prevention methods of different pulses.	K3	CO2
3	18	Analyse the composition and classification of poultry.	K4	CO3
4	19	Evaluate the types of rancidity and its prevention methods.	K5	CO4
5	20	Elaborate on importance and application for product formulation for an teenage girl .	K6	CO5

Z-Z-Z

END



PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2024  
(Fourth Semester)

Branch – FOODS AND NUTRITION

**NUTRITION AND ENVIRONMENTAL HEALTH**

Time: Three Hours

Maximum: 75 Marks

**SECTION-A (10 Marks)**

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

1. Name the toxin that binds to bile acids affecting absorption of fat-soluble vitamin.  
(i) Trypsin inhibitors (ii) Saponins  
(iii) Solanine (iv) Cyanogens
2. Identify the category of ionizing radiation.  
(i) Mutagen (ii) Teratogen  
(iii) Antioxidant (iv) Carcinogen
3. Find the edible oil toxin associated with cardiovascular diseases.  
(i) Alkaloids (ii) Tropane  
(iii) Erucic acid (iv) Ethyl amines
4. Choose the psychoactive compound derived from plants.  
(i) Aflatoxin (ii) Caffeine  
(iii) Bufotenin (iv) Brevitoxin
5. What is the primary cause of Eutrophication in aquatic ecosystem?  
(i) Lack of sunlight (ii) Heavy metal pollution  
(iii) Increased oxygen (iv) Excess nitrogen and phosphorous
6. Match the toxicant found in recycled papers affecting liver function.  
(i) Styrene (ii) Phosphorous  
(iii) Lead (iv) Mineral oil hydrocarbons
7. Which of the following mushroom is known for high toxicity.  
(i) Amanita phalloides (ii) Agaricus bisporus  
(iii) Pleurotus ostreatus (iv) Lentinula edodes
8. State the term used to describe the maximum amount of a food additive that can be safely consumed daily over a lifetime.  
(i) Reference Daily Intake (ii) Acceptable Daily Intake  
(iii) Tolerable Upper Intake Level (iv) Maximum Residue Limit
9. Identify the potential therapeutic effect of marijuana.  
(i) Decreased heart rate variability (ii) Increased anxiety levels  
(iii) Decreased pain perception (iv) Enhanced psychomotor skills
10. Choose the effect of thermal pollution in aquatic ecosystems.  
(i) Algae blooms (ii) Cold-water fish species  
(iii) Invasive species (iv) Aquatic mammals

Cont...

**SECTION - B (35 Marks)**

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 7 = 35)

- 11 a Justify the role of food chain, food web and bio-magnification.  
OR  
b Discuss on dose effect and dose response.
- 12 a Illustrate on occurrence and etiology of dietary toxins.  
OR  
b Recommend the treatments for effect of vasoactive amines.
- 13 a Evaluate the toxic effect of non-essential metal in foods.  
OR  
b State the possibilities of contamination of food by packaging materials.
- 14 a Organize the mode of action and safe level of using pesticides.  
OR  
b Classify the sources and biological effects of radioactive nucleotide.
- 15 a Sketch the characteristics and treatment of opiates and nicotine.  
OR  
b Explain different methods of solid waste disposal.

**SECTION - C (30 Marks)**

Answer any THREE Questions

ALL Questions Carry EQUAL Marks

(3 x 10 = 30)

- 16 Appraise on the absorption, distribution and excretion of xenobiotics.
- 17 Elucidate on natural toxins available in food.
- 18 Interpret on water pollution and its effect on aquatic organisms .
- 19 Enumerate on symptoms, treatment and detoxification of fungal contaminants.
- 20 Analyze the toxic effect of environmental contaminants.

Z-Z-Z

END