

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023
(First Semester)

Branch - NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS

FOOD CHEMISTRY/ CHEMISTRY OF FOODS

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	Choose the water activity scale. A) 0-1 B) 1-10 C) 1-100 D) 0-10	K1	CO2
	2	Show the number of hydrogen bonds of water can form with other water molecules. A) 4 B) 3 C) 2 D) 2	K2	CO2
2	3	Match the oil in water emulsion. A) Milk B) Butter C) Jam D) Meringue	K1	CO3
	4	Infer the example for foam. A) Milk B) Butter C) Jam D) Whipped cream	K2	CO3
3	5	Label the structural polysaccharides found within plant cell walls. A) Cellulose and Hemi Cellulose B) Glycogen C) Cellulose D) All the above	K1	CO1
	6	Relate: Number of mg of KOH required to neutralize the fatty acids in a gram of a fat. A) Polenske number B) Saponification number C) Iodine number D) RM Number	K2	CO1
4	7	Find the essential amino acid. A) Arginine B) Glycine C) Methionine D) Alanine	K1	CO4
	8	Interpret the bond between the carboxyl group of one amino acid and the -amino group of another. A) Peptide bond B) Hydrogen bond C) Glycosidic bond D) None of the above	K2	CO4
5	9	Label the category to which tartrazine belong. A) Synthetic color B) Artificial flavor C) Natural pigment D) Emulsifier	K1	CO3
	10	Infer the colour of betacyanins in acidic medium. A) Red B) Blue C) Green D) Grey	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 hydrogen ion concentration.	K2	CO2
	(OR)			
	11.b.	Show the factors affecting boiling point of water.		
2	12.a.	Outline the properties of colloids.	K2	CO3
	(OR)			
	12.b.	Summarize your understanding on emulsions.		
3	13.a.	Classify carbohydrates providing examples.	K2	CO4
	(OR)			
	13.b.	Infer the components of starch and explain gelatinization.		
4	14.a.	Compare enzymatic and non -enzymatic browning reactions.	K2	CO5
	(OR)			
	14.b.	Classify amino acids based on nutritional significance. Provide examples.		
5	15.a.	State the general characteristics of enzymes.	K2	CO3
	(OR)			
	15.b.	Show the flavoring components present in spices and condiments.		

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 importance of water activity in food stability and processing.	K2	CO2
2	17	Choose the factors affecting foam formation and stability.	K3	CO4
3	18	Identify the difference between hydrolytic and oxidative rancidity. Suggest methods to prevent rancidity.	K3	CO5
4	19	Explain the properties of proteins.	K2	CO1
5	20	Interpret the changes occurring in plant pigments during cooking and processing.	K2	CO3