25NDU102 / 22NDU102N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2025
(First Semester)

Branch- **NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS**

FOOD CHEMISTRY

Time: Three Hours Maximum: 75 Marks

SECTION-A

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

Module No.	Question No.	Question	K Level	CO
1	1	What is pH of pure water? a)4 b)6 c)7 d)9	K1	CO1
	2	The acidity of a fruit juice increases when_____ a) pH increases b) Hydrogen ion concentration increases c) Hydroxyl ion concentration increases d) Buffering capacity decreases	K2	CO1
2	3	Which of the following stabilizes foam in whipped cream? a) Casein b) Starch c) Fat globules partially coalescing d) Gelatin	K1	CO2
	4	Find the role of emulsifying agents in food. a) Decrease microbial growth b) Decrease viscosity c) Reduce surface tension between two phases d) Remove water	K2	CO2
3	5	Reichert-Meissl number is used to measure: a) Short-chain fatty acids in fat b) Degree of unsaturation c) Oxidation products d) Softening point	K1	CO3
	6	Degree of esterification in pectin affects_____ a) Color b) Gel strength c) Melting point d) Sweetness	K2	CO3
4	7	Name the enzyme that causes browning in fruits. a) Polyphenol oxidase b) Lipase c) Amylase d) Catalase	K1	CO4
	8	Why gel formation happens upon cooling of the Gelatin. a) Proteins hydrolyze into amino acids b) Partially denatured collagen molecules form a 3D network trapping water c) Proteins lose all water d) Maillard reaction	K2	CO4
5	9	Find the compound responsible for flavor in clove. a) Citral b) Vanillin c) Menthol d) Eugenol	K1	CO5
	10	Anthoxanthins are responsible for_____ a) Blue color in flowers b) White and pale yellow colors in vegetables c) Red in meat d) Brown in cocoa	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.	Illustrate on the structure of water molecule.	K2	CO1
		(OR)		
	11.b.	Infer on Boiling point of water and factors affecting it.		
2	12.a.	Summarize on formation and description of sols with examples.	K2	CO2
		(OR)		
	12.b.	Show the theory of emulsification.		
3	13.a.	Make use of Glycogen in food processing.	K3	CO3
		(OR)		
	13.b.	Identify the Physical properties of fat.		
4	14.a.	Choose plant proteins which are alternative to egg protein.	K3	CO4
		(OR)		
	14.b.	Select the factor that affecting Denaturation of proteins.		
5	15.a.	Elaborate on Natural flavouring components in spices and condiments.	K3	CO5
		(OR)		
	15.b.	Describe the structure and functions of hemoglobin and myoglobin.		

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 various concepts of water solute interaction.	K2	CO1
2	17	Classify Foams with method of foam formation.	K2	CO2
3	18	Identify the preventive measures for different types of rancidity.	K3	CO3
4	19	Apply suitable methods to prevent browning reactions in foods.	K3	CO4
5	20	Elucidate on water soluble plant pigments and its role in food processing.	K3	CO5

Z-Z-Z END