# PSG COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

## MSc DEGREE EXAMINATION DECEMBER 2023

(First Semester)

### Branch - FOOD TECHNOLOGY MANAGEMENT

#### FOOD CHEMISTRY

Time: Three Hours

Maximum: 75 Marks

#### SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

 $(10 \times 1 = 10)$ 

Module	Question	ALL questions carry EQU		K Level	СО
No.	No.	The aw value of highly perishabl	e foods is		
1	1	The aw value of highly perishaor	b. 0.95	K1	COI
		a. 0.91	d. 0.60		
		c. 0.87	tio of the vapor pressure (p) of		
		is defined as the ra	to the vapor pressure of pure		
	2	water in a material(100d)	to the vapor pressure of pure	K2	COl
		water(po) at the same tempe	b. Collidal effects		
		a. Humidity	d. Water activity		
		c. Emulsion			
	3	is a polysaccharides	1. Tastana	K1	CO2
		a. Sucrose	b. Lactose	16.1	
		c. Maltose	d. Glycogen		
2		occurs during dry heating and roasting of foods with			
4	4	a high concentration of carbol	hydrates.	K2	CO2
		a. Caramelisation	b. Maillard Reaction		
		c. Dehydration	d. Fragmentation		
	5	The proteins which give single	amino acid only upon	K1	CO3
		hydrolysis is called			
		a. Simple proteins	b. Conjugated proteins		
		a Derived proteins	d. All of above		
3	-	proteins are soluble	e in water, which coagulate on		CO3
	6	heating.		K2	
		a. Ovaglobulin	b. Albumin	1	
		o Prolamines	d. Myosin		
		is the esters of alveer	ol with fatty acids and		
	7	phosphate derivatives.	•	K1	CO4
		a. Fatty acid	b. Phosholipids	KI	0
		c. Waxes	d. Lipoproteins		
		The degree of unsaturation of	linids can be measured as		
4	8	The degree of unsaturation of	irpido vali o incis		
		7 11	b. Saponification number	K2	CO
		a. Iodine number	d. Polenske number		
		c. Reichert Meissel number	d. I Olelisite italiio		
		1 - Javilan	resent in green plants, algae and		
	9	is a complex molecule p	resent in green plants, algae and		00
		photosynthetic bacteria.	b. Metalloporphin	K1	CO
5		a. Xanthine	d. Phyllins		
		c. Chlorophyll d. Phyllins pigment gives colour to cauliflower, onions and		-	
	10		to caulillower, officies and		
		spinach.	1 Authorouthin	K2	CO
		a. Carotenoids	b. Anthoxanthin		
		c. Chlorophyll	d. Betalains		

#### SECTION - B (35 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

 $(5 \times 7 = 35)$ 

Module No.	Question No.	Question		со
1	11.a.	Construct the structure of water.		
	(OR)			CO 1
	11.b. Analyse the phase transition of water molecules.			
2	12.a.	Interpret about the Resistant starch & modified starch application in food industries.		
	(OR)			CO 2
	12.b.	Explain about the chemistry & food applications of Cyclodextrin & polyols.		
3	13.a.	Distinguish the physical & chemical properties of proteins.		
	(OR)			CO 3
	13.b.	Elaborate the physical & chemical properties of amino acids.	K4	COS
4	14.a.	Analyse any five characteristics of fats.		
	(OR)			CO 4
	14.b.	14.b. Interpret about the hydrogenation & winterization.		
5	15.a.	Examine the aroma compounds present in foods.		CO 5
	(OR)		K4	
	15.b. Classify pigment & explain its functions in food.			

### SECTION -C (30 Marks)

Answer ANY THREE questions

ALL questions carry EQUAL Marks  $(3 \times 10 = 30)$ 

Module No.	Question No.	Question		СО
1	16	Elaborate about the Intermediate moisture foods.		CO1
2	17	Elaborate on browning reactions.		CO2
3	18	Evaluate the synthesis of amino acids for food fortification.		CO3
4	19	Deduct the chemistry of frying oils & flavour changes in fats & oils.	K5	CO4
5	20	Explain the presence of Anti-Nutritional factors in foods & its prevention.		CO5