

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2023  
(First Semester)

Branch - NUTRITION, FOOD SERVICE MANAGEMENT AND DIETETICS

CHEMISTRY - 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	Phenolphthalein is a ___ indicator. a) Acid-Base                      b) Redox c) Iodometric                      d) Iodimetry	K1	CO1
	2	Show the chemical used in the first aid treatment of acid on eyes. a) NH <sub>4</sub> OH                      b) CH <sub>3</sub> COOH c) C <sub>2</sub> H <sub>5</sub> OH                      d) NaHCO <sub>3</sub>	K2	CO1
2	3	Mutual sharing of electrons between two atoms is called ___ a) Covalent bond                      b) Ionic bond c) Coordinate bond                      d) Electrovalent bond	K1	CO2
	4	Identify the Arrhenius base a) NaOH                      b) KOH c) H <sub>2</sub> O                      d) All the above	K2	CO2
3	5	Amino acid contains amino and ___ functional groups. a) Carboxylic                      b) alcoholic c) phenolic                      d) basic	K2	CO3
	6	Find the functional protein from the following a) Alanine                      b) Albumin c) Chromoproteins                      d) Enzymes	K1	CO3
4	7	Pick out the following which one is reduce the body temperature a) Antibiotics                      b) Antipyretics c) Analgesics                      d) Antinarcotics	K1	CO4
	8	Show the drug which can be used for treat the bacterial infection a) Antipyretics                      b) Analgesics c) Antibiotics                      d) Tranquilozers	K2	CO4
5	9	The exact P <sup>H</sup> of rain water is ___ a) 5                      b) 4 c) 7                      d) 1	K2	CO5
	10	What phenomena will occur when a solution of quinine sulphate on exposure to visible light? a) Fluorescence                      b) Phosphorescence c) Chemiluminescence                      d) Bioluminescence	K1	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.	Write the simple first aid procedure for accidents.	K3	CO1
	(OR)			
	11.b.	Organize the acid base and precipitation titrations with two examples of each.		
2	12.a.	Define oxidation and reduction concept with three examples of each.	K2	CO2
	(OR)			
	12.b.	Explain the hydrogen bonding and coordinate covalent bonding with examples.		
3	13.a.	Explain the chemistry of furan (Preparation, Properties and uses).	K2	CO3
	(OR)			
	13.b.	Explain the structure of Proteins and classify the proteins.		
4	14.a.	Organise the mode of action of sulphapyridine.	K3	CO4
	(OR)			
	14.b.	What are the criteria for a dye? Identify and discuss the food colours.		
5	15.a.	Simplify the terms with their formula. a) P <sup>H</sup> b) Buffer c) Molality d) PPM	K4	CO5
	(OR)			
	15.b.	Analyze the following terms with examples: a. Chemisorption b. Physisorptions		

**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	Apply the procedure for storage and handling of chemicals.	K3	CO1
2	17	Develop the following concepts of acids and bases and give an example of each. 1. Arrhenius concept 2. Bronsted Lowry concept	K3	CO2
3	18	Discuss the chemistry of Pyridine and the preparation, properties and uses of glycine.	K3	CO3
4	19	Organize the dyes based on their chemical structure and applications.	K3	CO4
5	20	Construct the Freundlich adsorption isotherms.	K3	CO5

Z-Z-Z . . . . . END