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22FPB104N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION MAY 2025
(First Semester)

Branch - **FOOD PROCESSING TECHNOLOGY**

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	Choose the technique used for separating solids from liquids using a suction pump. a) Gravity filtration b) Centrifugation c) Vacuum filtration d) Paper chromatography	K1	CO1
	2	Infer the best method to reduce systematic errors. a) Calibration of instruments b) Repeating the experiment c) Using unverified chemicals d) Guessing values	K2	CO1
2	3	Recall the type of bonds formed by electron transfer. a) Covalent bond b) Coordinate bond c) Ionic bond d) Hydrogen bond	K1	CO2
	4	Show how the VSEPR theory is used to determine molecular shape. a) The bond length of molecules b) The shape of molecules c) The polarity of molecules d) The energy of molecules	K2	CO2
3	5	Choose the method for expressing concentration. a) Density b) Viscosity c) Molality d) Surface tension	K1	CO3
	6	Show the electrolyte imbalance that can cause high blood pressure. a) Low potassium b) High water intake c) Low sodium d) Excess glucose	K2	CO3
4	7	Select the alkaloid responsible for the pungency of the black pepper. a) Nicotine b) Coniine c) Piperine d) Atropine	K1	CO4
	8	Infer the properties of flavonoids that contribute to their antioxidant activity. a) Hydrolysis b) Chelation of metal ions c) Polymerization d) Refractive index	K2	CO4
5	9	What is the full form of LDPE? a) Low Density Polymer Ethylene b) Low Density Polyethylene c) Light Density Polyethylene d) Linear Density Polyethylene	K1	CO5
	10	Show the polymer commonly used in food packaging. a) Nylon b) Terylene c) LDPE d) Rubber	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.	Recall the safety precautions for handling acids and toxic chemicals in the lab.	K1	CO1
		(OR)		
	11.b.	Show how systematic errors can be minimized in chemical analyses.		
2	12.a.	Explain the mechanism of auto-oxidation with an example.	K2	CO2
		(OR)		
	12.b.	Illustrate oxidation and reduction, and explain the oxidation number with examples.		
3	13.a.	Explain Faraday's laws of electrolysis.	K2	CO3
		(OR)		
	13.b.	Outline the ionic product of water and its significance.		
4	14.a.	Sketch the biological properties of coniine, piperine, and nicotine.	K3	CO4
		(OR)		
	14.b.	Construct an analysis of the functional properties of flavones in fruits and vegetables.		
5	15.a.	Describe the properties and applications of elastomers.	K3	CO5
		(OR)		
	15.b.	Narrate the different types of pesticides and their applications.		

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	Recall the different stirring and filtration techniques using examples.	K1	CO1
2	17	Explain the different types of chemical bonding using suitable examples.	K2	CO2
3	18	Illustrate the classification of electrolytes and their roles in biological systems.	K2	CO3
4	19	Build the occurrence, function, classification, and isolation of alkaloids.	K3	CO4
5	20	Explain the impact of pesticides on the environment and measures to control its demerits.	K3	CO5

Z-Z-Z END