25FBP104/ 22FPB104N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BVoc DEGREE EXAMINATION DECEMBER 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	Which acid is commonly stored in a glass-stoppered bottle? a) Hydrochloric acid b) Sulphuric acid c) Nitric acid d) Acetic acid	K1	CO1
	2	Relative error is defined as a) True value / measured value b) Absolute error / true value × 100 c) Absolute error × true value d) Measured value × 100	K2	CO1
2	3	The shape of a methane molecule according to VSEPR theory is a) Linear b) Trigonal planar c) Tetrahedral d) Trigonal bipyramidal	K1	CO2
	4	The hybridization of carbon in CH_4 is a) sp b) sp^2 c) sp^3 d) dsp^2	K2	CO2
3	5	Identify the law relates conductance of electrolyte with current and voltage? a) Ohm's law b) Faraday's law c) Boyle's law d) Raoult's law	K1	CO3
	6	The pH of 0.001 M HCl is a) 1 b) 2 c) 3 d) 4	K2	CO3
4	7	Lycopene is mainly present in a) Spinach b) Tomato c) Carrot d) Potato	K1	CO4
	8	Which phytochemical class strengthens plant defense against pathogens? a) Alkaloids b) Glycosides c) Terpenoids d) All of the above	K2	CO4
5	9	Bakelite is a_____. a) Thermoplastic b) Thermosetting polymer c) Elastomer d) Copolymer	K1	CO5
	10	Identify the composition of LPG. a) Methane and Ethane b) Benzene and Toluene c) Propane and Butane d) Ethylene and Acetylene	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.	Summarize on Storage and handling of acids.	K2	CO1
		(OR)		
	11.b.	Compare the Absolute error and relative error.		
2	12.a.	Indicate the electronic theory of valency with one example.	K2	CO2
		(OR)		
	12.b.	Define reaction rate and factors affecting the rate of reaction.		
3	13.a.	Distinguish between ideal and non-ideal solutions with examples.	K3	CO3
		(OR)		
	13.b.	Articulate the factors affecting the conductance of electrolytic solutions.		
4	14.a.	Define phytochemistry and discuss its scope in food science.	K3	CO4
		(OR)		
	14.b.	Sketch out the role of anthocyanins and isoflavones as flavonoids.		
5	15.a.	Prioritize on elastomers and their applications.	K4	CO5
		(OR)		
	15.b.	Critically evaluate the fibre-reinforced plastics and glass-reinforced plastics.		

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	Explain the various types of solvents with its applications.	K2	CO1
2	17	Demonstrate the nature and properties of electrovalent bond and covalent bond with suitable examples.	K2	CO2
3	18	Illustrate the Arrhenius theory of electrolytes and its limitations.	K3	CO3
4	19	Point out the role of phytochemicals in enhancing food quality and shelf life.	K4	CO4
5	20	Assess on benzene and toluene as solvents and feedstock in chemical industries.	K5	CO5

Z-Z-Z END