

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

$(10 \times 1 = 10)$

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 $\times 100$ c) Absolute error \times true value d) Measured value $\times 100$	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 x 7 = 35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Summarize on Storage and handling of acids. (OR)	K2	CO1
	11.b.	Compare the Absolute error and relative error.		
2	12.a.	Indicate the electronic theory of valency with one example. (OR)	K2	CO2
	12.b.	Define reaction rate and factors affecting the rate of reaction.		
3	13.a.	Distinguish between ideal and non-ideal solutions with examples. (OR)	K3	CO3
	13.b.	Articulate the factors affecting the conductance of electrolytic solutions.		
4	14.a.	Define phytochemistry and discuss its scope in food science. (OR)	K3	CO4
	14.b.	Sketch out the role of anthocyanins and isoflavones as flavonoids.		
5	15.a.	Prioritize on elastomers and their applications. (OR)	K4	CO5
	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 x 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