

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2026
(Second Semester)**

Branch – **CHEMISTRY**

GENERAL CHEMISTRY – II

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 metal is used as dehydrating agent in the preparation of absolute alcohol? a) Li b) Mg c) Ca d) Be	K1	CO1
	2	Infer the electronic configuration of Xe. a) $2s^2 2p^6$ b) $3s^2 3p^6$ c) $4s^2 4p^6$ d) $5s^2 5p^6$	K2	CO1
2	3	Name the process in which the ore is heated strongly in the absence of air. a) Calcination b) Roasting c) Smelting d) Crushing	K1	CO2
	4	Interpret the ore of Vanadium. a) Rutile b) Ilmenite c) Scheelite d) Patronite	K2	CO2
3	5	Find the extensive variable. a) Surface tension b) Volume c) Viscosity d) Temperature	K1	CO3
	6	Relate the enthalpy of neutralization of strong acid by a strong base. a) -57.32 KJ/mol b) +57.32 KJ/mol c) -51.46 KJ/mol d) +51.46 KJ/mol	K2	CO3
4	7	Select the hydrocarbon present in Marsh gas. a) $\text{CH}_2=\text{CH}_2$ b) CH_4 c) CHCl_3 d) CCl_4	K1	CO4
	8	Ethylene and acetylene can be distinguished by using _____. a) Bayer's reagent b) Ninhydrin c) Tollen's reagent d) Phenol	K2	CO4
5	9	Recall the name of aromatic hydrocarbons. a) Arenes b) Huckel's compounds c) Trienes d) Alkoxy compounds	K1	CO5
	10	Infer why Benzene undergoes substitution reaction more easily than addition reaction. a) It has cyclic structure b) It has three double bonds c) It has six hydrogen atoms d) There is delocalization of electrons	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.	Outline the extraction of Be.	K2	CO1
	(OR)			
	11.b.	Explain any method of separation of noble gases.		
2	12.a.	Discuss the van Arkel's process with schematic diagram.	K6	CO2
	(OR)			
	12.b.	Compile the extraction of W.		
3	13.a.	Elaborate Joule Thomson coefficient.	K6	CO3
	(OR)			
	13.b.	Formulate Kirchoff's equation.		
4	14.a.	Explain the chemical properties of alkenes.	K5	CO4
	(OR)			
	14.b.	Interpret the preparation methods of alkynes.		
5	15.a.	Predict an example of aromatic, non-aromatic, anti-aromatic and homo aromatic compounds.	K6	CO5
	(OR)			
	15.b.	Discuss Friedel Craft's alkylation reaction with its mechanism.		

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	Propose the diagonal relationship between Li and Mg.	K6	CO1
2	17	Compile the process of manufacture of steel.	K6	CO2
3	18	Deduct the relationship between Cp and Cv.	K5	CO3
4	19	Predict the products of the following reactions. a. Hydroboration b. Ozonolysis c. Epoxidation d. Diels Alder reaction	K6	CO4
5	20	Interpret the mechanism of nitration and sulphonation reaction using benzene.	K5	CO5

Z-Z-Z END