

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

**BSc DEGREE EXAMINATION MAY 2025
(Fourth Semester)**

Branch - BOTANY

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	Carbon is made available to crop plants in this form. a) element carbon b) carbonates c) carbon dioxide d) amino acids	K1	CO1
	2	Potassium is used as fertilizer for which purpose? a) Development of stems and leaves b) Accelerating seeding c) To prevent disease d) Early stages of plant growth	K2	CO1
2	3	What is the product when thiophene reacts with Br ₂ in benzene? a) 2-bromothiophene b) 3-bromothiophene c) 2,5-dibromothiophene d) 3,4-dibromothiophene	K1	CO2
	4	Which of the following amino acids is not necessary to be taken in the diet? a) histidine b) threonine c) serine d) lysine	K2	CO2
3	5	Alizarin belongs to the class of----. a) Vat dyes b) Mordant dyes c) Substantive dyes d) Reactive dyes	K1	CO3
	6	Methyl group is mainly present in which photosynthetic pigment? a) Chlorophyll b b) Xanthophyll c) Carotenoids d) Chlorophyll a	K2	CO3
4	7	The reciprocal of resistivity of a conductor is-----. a) Conductance b) capacitance c) conductivity d) none of these	K1	CO4
	8	Which one of the following is an example of adsorption? a) ammonia in contact with water b) anhydrous CaCl ₂ with water c) silica gel in contact with water vapours d) all of these	K2	CO4
5	9	Which of the following metal can inhibit bacterial growth by binding to proteins? a) Zinc b) Plants c) Nitrogen d) Vermicomposting	K1	CO5
	10	Hemoglobin is a heme-containing globular protein present in erythrocytes. Which of the following is the function of hemoglobin? a) Storage of oxygen b) Transport of oxygen c) Both of the above d) None of the above	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.	Utilizing the classification of fertilizers.	K3	CO1
		(OR)		
	11.b.	Develop the basic principles of Pesticides.		
2	12.a.	Give the preparation, properties and uses of thiophene.	K4	CO2
		(OR)		
	12.b.	Examine the characteristics of enzymes.		
3	13.a.	Justify requisites of dyes in Chromophore and auxochrome.	K5	CO3
		(OR)		
	13.b.	Assess the characteristics of pigments.		
4	14.a.	Define the followings terms: i) Specific conductance ii) Molar conductance iii) Equivalent conductance.	K4	CO4
		(OR)		
	14.b.	Analyse the applications of adsorptions.		
5	15.a.	Discuss the importance role of essential elements in biological systems.	K5	CO5
		(OR)		
	15.b.	Justify elementary the idea about green chemistry.		

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	Analyze the nitrogeous fertilizers.	K4	CO1
2	17	Evaluate the manufacture of ethyl alcohol from molasses.	K5	CO2
3	18	How will you prepare malachite green and indigo?	K6	CO3
4	19	Simplify the Langmuir adsorption isotherm.	K4	CO4
5	20	Write the importance of toxicity in mercury and cadmium.	K5	CO5

Z-Z-Z

END