

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2026
(Fourth Semester)

Branch- ZOOLOGY

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 among the following is a bidentate ligand? a. Cl^- b. CN c. en d. CO	K1	CO1
	2	Urea is _____ Fertilizer. a. Nitrogenous b. Potassic c. Phosphatic d. Natural	K2	CO1
2	3	Pyridine is _____ in nature. a. aliphatic b. aromatic c. polymer d. non-aromatic	K1	CO2
	4	What is a bond between amino acids called? a. Ionic bond b. Acidic bond c. Peptide bond d. Hydrogen bond	K2	CO2
3	5	Example for vat dye is a. alizarin b. Indigo c. malachite green d. martius blue.	K1	CO3
	6	Sulpha drugs are used as a. antimalarial b. analgesic c. antipyritics d. antibacterial	K2	CO3
4	7	What is the mathematical relation of Ohm's law? a. $I=V/R$ b. $V=I/R$ c. $R=V/I$ d. $I = R / V$	K1	CO4
	8	pH of drinking water is near to, a. 6 b. 7 c. 8 d. 5	K2	CO4
5	9	Metal present in hemoglobin is, a. Mg b. Co c. Fe d. Mn	K1	CO5
	10	Which of the following is a green solvent. a. acetone b. EtOH c. water d. chloroform	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.	Discuss the salient features of Werner's coordination theory.	K2	CO1
		(OR)		
	11.b.	What are fertilizers? Discuss the classification of fertilizers.		
2	12.a.	Discuss the classification of proteins.	K3	CO2
		(OR)		
	12.b.	Illustrate the manufacturing of wine.		
3	13.a.	Account on the following, i) antibiotics ii) anesthetics.	K2	CO3
		(OR)		
	13.b.	What are dyes? Give the requisites of a good dyes.		
4	14.a.	Explain the following terms with example i) Specific conductance ii) Equivalent conductance	K1	CO4
		(OR)		
	14.b.	State and derive Beer-Lambert's law.		
5	15.a.	Discuss about non-heme iron-sulphur proteins.	K4	CO5
		(OR)		
	15.b.	Discuss the industrial uses and pollution sources of lead.		

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	Elaborate the biological role of hemoglobin with a neat illustration.	K2	CO1
2	17	i) List out the characteristics of enzymes. ii) Explain the mechanism of enzyme action.	K3	CO2
3	18	Explain the preparation of the following dyes, i) malachite green ii) phenolphthalein	K2	CO3
4	19	Explain the following phenomenon with examples i) Phosphorescence ii) Chemiluminescence iii) Photo sensitization.	K1	CO4
5	20	Discuss the role of essential and trace elements in biological systems.	K4	CO5

Z-Z-Z END