PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Fourth Semester)

Branch – **PHYSICS**

CHEMISTRY - II

Time: Three Hours **Maximum: 50 Marks**

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (5 x 1 = 5)

1. How many significant figures are in the number 0.00150
   (i) 5 (ii) 3
   (iii) 6 (iv) 2

2. Which of the following is not a five membered ring?
   (i) Pyridine (ii) Pyrrole
   (iii) Furan (iv) Thiophene

3. The conductivity of electrolytic conductors is due to_____
   (i) flow of free mobile electrons (ii) movement of ions
   (iii)either movement of electrons or ions (iv) free radicals

4. If a liquid crystalizes into a solid, entropy will be
   (i) increased (ii) decreased
   (iii) zero (iv) remains unchanged

5. Select the wavelength range corresponding to UV-Visible region.
   (i) 400 nm – 800 nm (ii) 200 nm – 800 nm
   (iii) 10 nm – 700 nm (iv) 700 – 800 nm

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 3 = 15)

6. a) Illustrate the basic Principles of volumetric analysis.

   OR

   b) Differentiate between Precision and Accuracy.

7. a) Compare the basicity of Pyridine with that of Pyrrole.

   OR

   b) Classify Proteins.

8. a) State Faraday's law and Define Specific Conductivity.

   OR

   b) Bring out the difference between Chemisorption and Physisorption.

Cont...

9. a) Discuss the Reversible and Irreversible process with examples.

OR

b) State first and third law of thermodynamics.

10. a) Analyze the various types of electronic transition.

OR

b) Explain the following terms: (i) Bathochromic shift

(ii) Hypsochromic shift.

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks (5 x 6 = 30)

11. a) Analyze primary and secondary standard solvents.

OR

b) Account on lab hygiene and safety.

12. a) Predict the preparation, properties and uses of Furan.

OR

b) Describe the manufacture of soap.

13. a) Evaluate the acid base titration of Conductometric titration

OR

b) Determine Freundlich adsorption isotherm.

14. a) Derive the relation between C_P and C_V.

OR

b) Develop Joule – Thompson effect.

15. a) Describe the instrumentation of UV – Visible spectroscopy.

OR

b) Justify Lambert Beer's law.

Z-Z-Z END