

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2019
(Fourth Semester)

Branch- BOTANY

CHEMISTRY II

Time: Three Hours

1

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 2 = 20)

- 1 Give the preparation method of Caro's acid.
- 2 Name any two phosphatic fertilizers and outline any one preparatory method.
- 3 Write any two reactions of pyridine.
- 4 Outline the process of manufacture of wine from molasses.
- 5 Explain the term : Mole fraction.
- 6 Define Normality.
- 7 Define : Molar conductivity. Give its relation with specific conductivity.
- 8 What are adsorption isotherms?
- 9 Give any two toxic effects of chromium.
- 10 What is atom economy?

SECTION - B (25 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 5 = 25)

- 11 a Describe the preparation, properties and uses of Marshal's acid.
OR
b Name the following according to IUPAC : (i) $[\text{Cr}(\text{H}_2\text{O})_4\text{Cl}_2]\text{Cl}$
(ii) $\text{K}_4[\text{Fe}(\text{CN})_6]$ (iii) $[\text{Pt}(\text{NH}_3)_2\text{Cl}_4]$ (iv) $[\text{Co}(\text{NH}_3)_6][\text{CuCl}_5]$
- 12 a Describe the preparation and properties of glycine.
OR
b What are enzymes? Explain its mechanism of action.
- 13 a Enumerate the methods of purification of organic solids.
OR
b Give a detailed account of distillation of organic liquid under reduced pressure.
- 14 a Discuss the importance of pH and buffers in living systems.
OR
b Enumerate the applications of adsorption.
- 15 a Discuss the role of Na^+ and Kf in biological systems.
OR
b Describe the role of haemoglobin in living systems.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3 x 10 = 30)

- 16a What is meant by chelation? Explain its industrial importance. (5)
- b Write a brief notes on fertilizers. (5)
- 17 Give the comprehensive account of the structure of proteins.
- 18 Explain paper chromatography. How it is carried out? Mention its advantages.
- 19a State and explain Kohlrausch law. (5)

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