

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2018
(Fourth Semester)

Branch - **BOTANY**

CHEMISTRY-II

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

- 1 Give any two preparation methods of Marshall's acid.
- 2 Name the following according to IUPAC:
a) $K_3[Fe(CN)_6]$ and b) $[Cr(H_2O)_4Cl_2]Cl$
- 3 How does furan react with a mixture of HCN and HCl?
- 4 Outline the process of manufacture of spirit from molasses.
- 5 What is R_f value in chromatographic technique?
- 6 Give the principle of paper chromatography.
- 7 Define: Ohm's law.
- 8 What are buffer solutions? Mention its importance.
- 9 Give any two toxic effects of Lead.
- 10 Draw the structure of myoglobin.

SECTION - B (25 Marks)

Answer **ALL** Questions

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

- 11 a Describe the pollutants of Werner's theory of coordination compounds.
OR
b What is meant by chelation? Bring its industrial importance.
- 12 a Describe the preparation and properties of alanine.
OR
b What are enzymes? Explain its mechanism of action.
- 13 a Enumerate the different modes of expressing concentration of a solution.
OR
b Give a detailed account of steam distillation in purification of organic liquids.
- 14 a What is the effect of dilution on specific conductance and equivalent conductance?
OR
b Describe the important applications of adsorption.
- 15 a Discuss the role of Mg^{2+} and Ca^{2+} 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)

- 16 Give a comprehensive account of Fertilizers.
- 17 Discuss the structure of Proteins.
- 18 a) What is Column chromatography? How it is carried out? (6)
b) How is organic substance purified by crystallization method? (4)