

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

Branch - CHEMISTRY

GENERAL CHEMISTRY - IV

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer ALL questions

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

- 1 Define adsorption chromatography.
- 2 What are the solvents used in plant extraction?
- 3 What is meant by calcination? Give an example.
- 4 Write any two uses of titanium.
- 5 Give one example for primary, secondary and tertiary amines.
- 6 What is phase transfer catalyst? Give an example.
- 7 What are enantiomers? Give examples.
- 8 Define Raoult's law.
- 9 Define the term flash point.
- 10 How will you manufacture water gas?

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Explain the principle of solvent extraction.
OR
b Describe the theory of paper chromatography.
- 12 a Discuss alumino-thermic process with suitable example.
OR
b How will you extract tungsten from its ore?
- 13 a Explain the reduction of nitro arenes in acidic neutral and acidic media.
OR
b Describe the properties of diazomethane.
- 14 a Write notes on resolution.
OR
b Describe the optical isomerism in oximes.
- 15 a Discuss the terms octane number and cetane number.
OR
b Explain the production of producer gas. Give its applications.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 Describe the theory and techniques of column chromatography. Give its applications.
- 17 Discuss the various methods used in the refining of metals.
- 18 Describe the preparation and properties of diazoacetic ester.
- 19 Write notes on (i) Elements of symmetry and (ii) Optical activity in biphenyls.