

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 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 What is meant by solvent extraction?
- 2 Define ion exchange capacity.
- 3 What is roasting? Give an example.
- 4 Give any two uses of molybdenum.
- 5 Write the reduction of nitroarene in acid medium with an example.
- 6 Why secondary amines are more basic than ammonia?
- 7 What are chiral and achiral molecules? Give an example for each.
- 8 What is Walden inversion?
- 9 Write the composition of petroleum.
- 10 What are the advantages of gaseous fuels?

SECTION - B (25 Marks)

Answer ALL Questions

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

- 11 a Explain the continuous extraction process.
OR
b Write a note on ion-exchange chromatography. .
- 12 a Describe the various methods used in the concentration of ores.
OR
b Mention the ores of vanadium. How will you extract vanadium from its ores?
- 13 a Discuss the general methods of preparation of alkanes.
OR
b Write a note on reductive amination.
- 14 a Give an account on the elements of symmetry.
OR
b What is racemization? Explain the mechanism of racemization.
- 15 a What is knocking? Give an account on antiknocking compounds.
OR
b Describe the manufacture of water gas. Give its applications.

SECTION - C (30 Marks)

Answer any THREE Questions

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

- 16 Write an essay on high performance liquid chromatography.
- 17 Mention the ores of iron. How will you extract iron from its ore? Write the uses of iron.
- 18 How will you separate primary, secondary and tertiary amines from its mixture?
- 19 Explain the following (i) geometrical isomerism in oxines and (ii) optical activity in allenes.
- 20 Write notes on (i) octane number and cetane number and (ii) production of gobar gas and its applications.