

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(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 Which type of compounds can be purified by continuous extraction methods?
- 2 What is the principles of chromatography?
- 3 Which type of cations are reduced by autoreduction (smelting) method?
- 4 What are minerals and ores?
- 5 What is carbylamines reaction?
- 6 How will you synthesize benzylamine from benzene diazonium chloride?
- 7 Define enantiomers and diastereoisomers.
- 8 What do you mean by racemisation?
- 9 Define octane number.
- 10 What is water gas?

SECTION - B (25 Marks)

Answer **ALL** Questions

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

11 a Write about the technique of paper chromatography.

OR

b Briefly explain the principles and applications of HPLC.

12 a Explain the froth floatation method with a diagram.

OR

b Write notes on : (i) Zone refining and (ii) Vacuum arc furnace refining.

13 a Give the mechanism of nitration of benzene.

OR

b Write about the reductive deamination of aldehyde and ketone.

14 a Write notes on Walden inversion .

OR

b Write elaborately on optical activity of allenes.

15 a Explain the production of gobar gas.

OR

b Write notes on (i) flash point and (ii) cetane number.

SECTION -C (30 Marks)

Answer any **THREE** Questions

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

- 16 Give the theory and technique of column chromatography.
- 17 Write about the occurrence, extraction and metallurgy of Ti.
- 18 Explain the role of amine salts as phase transfer catalysts.
- 19 What is absolute configuration? Discuss the R,S system of specifying the absolute configuration of asymmetric molecules.
- 20 Explain elaborately about the processing of crude petroleum.

Z-Z-Z

END