PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2018
(Third Semester)

Branch - **PHYSICS**

CHEMISTRY -1

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** marks (10x2 = 20)

1 What are chelates? Give examples.
2 What do you mean by interhalogen compounds? Give examples.
3 State isoprene rule.
4 Name any two dyes used in acid-base titrations.
5 What is meant by polymorphism?
6 Define unit cell.
7 Define: Half life period.
8 Give the unit of first and second order reactions.
9 Write any two conventional sources of energy.
10 Differentiate between p- and n- type semiconductors.

SECTION - B (25 Marks!

Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5x5 = 25)

11 a Discuss the preparation and structure of SF_6.
OR
b Write a note on Sidgwick theory of coordination compounds.

12 a Explain the isolation and uses of coniine.
OR
b What are dyes? How are they classified?

13 a Give an account of: (i) Center of symmetry (ii) Axis of symmetry. (2 *Vi + 2 Vi)*
OR
b Explain the nature of unit cells of diamond and graphite.

14 a Derive an expression for the rate constant of second order reaction.
OR
b Write a method to convert ammonium cyanide into urea.

15 a Give a short note on the four segments of environment.
OR
b Explain the radioactive pollution and its effects.

SECTION - C (30 Marks)

Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3x10 = 30)

16 Explain the preparation, properties and structure of IF_S and $PC1_5$. (5+5)

17 a Explain the isolation of camphor and citral. Mention any two uses for each. (5)
b Describe the preparation, properties and uses of polyacrylonitrile. (5)

18 a Write a short notes on Weiss and Miller indices. (5)
b Briefly explain the crystal structure of NaCl. (5)

19 a Discuss any one method of determining the order of a reaction. (5)
b Write short notes on complex thermal reactions. (5)

on nii/o an amount of • fat Photovoltaic effect (b) Silicon solar cell. (5+5)