PSG **COLLEGE OF ARTS** & **SCIENCE**
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2018
(Third Semester)

Branch - **PHYSICS**

CHEMISTRY-I

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks (1 0 x 2 = 20)

1 Mention any two uses of ICI.
2 What are Chelates?
3 Draw the structure of Conine
4 What are mordant dyes? Give an example.
5 What is meant by Isomorphism ?
6 Give any one example of FCC and BCC crystals.
7 Define: Half life period.
8 Distinguish between order and molecularity of a reaction.
9 Give any two conventional sources of energy.
10 State: Semiconductor.

SECTION - B (25 Marks)
Answer ALL Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

1 1 a Predict the shapes of XelU and XelQ using VSEPR theory .
OR
b Write a note on Sidgwick theory of coordination compounds.

12 a Explain the isolation and uses of nicotine.
OR
b Discuss shortly about bio degradable polymers.

13 a Give an account of: (i) Center of Symmetry (ii) Axis of Symmetry
OR
b . Briefly explain about the structure of NaCl.

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

15 a Explain the thermal pollution and its effects.
OR
b Give an account on silicon solar cell.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Explain the preparation, properties and structure of IP_7 and BrF_3. (5+5)
17 a) Explain the isolation of methanol and citral. Mention any two uses for each.(5)
b) Describe the preparation and uses of Teflon and Polyester. (5)
18 a) Write a short notes on WeiSs and Miller indices. (5)
b) Explain the nature of unit cells of diamond and graphite. (5)
19 a) Discuss any one methods of determining the order of a reaction. (5)
b) Write short notes on complex thermal reactions. (5)
20 a) Explain in detail the radioactive pollution and its control measures. (5)
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