14CHU04

PSG COLLEGE OF ARTS & SCIENCE

(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2019

(Second Semester)

Branch - **CHEMISTRY**

GENERAL CHEMISTRY - II

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

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

1 Arrange the alkali metals in the increasing order of reactivity.
2 Why do Xenon undergo reactions?
3 Define inversion temperature.
4 Distinguish between intensive and extensive properties.
5 Name two applications of x-rays.
6 Give the two characteristic properties of amorphous solids.
7 How do you covert acetylene to acetaldehyde?
8 What is aromatization reaction? Give an example.
9 What are activating substituents? Give an example.
10 How is toluene obtained from benzene?

SECTION - B (25 Marks)

Answer **ALL** Questions

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

11 a Give the anomalous behaviour of Be.

OR

b Explain the diagonal relationship between Li and Mg.

12 a Drive the relation between cp and cv.

OR

b Distinguish between state and path functions.

13 a Explain Debye-Scherrer method. Give its applications.

OR

b State and explain Miller indices.

14 a Explain hydroboration reaction with an example.

OR

b Illustrate Diels-Alder reaction with an example.

15 a State and explain HuckeTs rule.

OR

b Give the applications of Friedal-Crafts reaction.

SECTION - C (30 Marks)

Answer any **THREE** Questions

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

16 Describe the two methods of separation of noble gases.

17 State Bond dissociation energy and apply to determine the enthalpies of compounds with an example.

18 Explain the following:
a) Bragg's equation (ii) NaCl structure.

19 Describe the Markownikoff s and Saytzeff & Hofmann rules. Give their significances.

20 Explain the following: