B.Sc. DEGREE EXAMINATION,NOVEMBER 2019
I Year I Semester
General Chemistry - II

Time : 3 Hours **Max.marks :60**

Section A $(10 \times 1 = 10)$ Marks

Answer any **TEN** questions

1. What is Compton Effect?
2. Write the Pauli's exclusion principle.
3. What is photo electric effect?
4. Define – Mulliken's Scale.
5. What is Sanderson electron density ratio?
6. Write the Wurtz reaction.
7. What is Baeyer's strain theory?
8. Define – Miller indices.
9. Define – Schottky and Frenkel defects.
10. Write the Born – Lande equation.
11. What are Non-aqueous solvents? How are they classified?
12. What are Hard and Soft acids?

Section B $(5 \times 4 = 20)$ Marks

Answer any **FIVE** questions

13. Write note on black body radiation.
14. Explain the Heisenberg's Uncertainty principle and its significance.
15. Discuss the oxidation state and variable valency properties of d block elements.
16. Explain the preparation of alkanes by Kolbe's electrolytic and Corey House methods.
17. Write note on Space lattice and Bravais lattice.
18. Derive the Bragg's equation of X – ray diffraction.
19. Explain the Arrhenius and Lewis theories of acids and bases.

Section C $(3 \times 10 = 30)$ Marks

Answer any **THREE** questions

20. Explain the postulates, applications and limitations of Bohr's model of an atom.

21. Discuss the factors affecting the Ionisation potential.

22. Give preparation of cycloalkanes by Dieckmann's ring closure reaction.

23. Describe the laws of crystallography.

24. Discuss the concept and application of solubility product and common ion effect in qualitative analysis.

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