B.Sc. DEGREE EXAMINATION,NOVEMBER 2018
I Year I Semester
Core Major - Paper II
GENERAL CHEMISTRY - II

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

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

Answer any **TEN** questions

1. What is the significance of ψ?
2. Define aufbaus principle.
3. What are inner transition elements?
4. What is Wurtz reaction.
5. Define vander Waals radii.
6. Define space lattice.
7. What is Madelungs constant?
8. State Lewis acid concept.
9. What is an aprotic solvent? give an example.
10. what are ring opening reactions give examples
11. State Hund's rule.
12. Give an example for common ion effect.

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

Answer any **FIVE** questions

13. Explain Bayer's ring strain theory.
14. Discuss the structure of NaCl.
15. Derive Bragg's equation.
16. Explain Slaters rules and mention its applications.
17. Write a short note on photoelectric effect.
18. Write the mechanism involved in Corey House synthesis
19. Briefly narrate Arrhenius theory of acid-base.

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

Answer any **THREE** questions

20. Explain Bohr's atomic model theory.

21. Discuss about the imperfections found in crystals.

22. Illustrate the applications of solubility product and common ion effect concepts in qualitative analysis

23. Write suitable mechanism involved in the following (i) halogenation of methane, (ii) Dickmanns ring closure, (iii) Hydrogenation of alkenes

24. a. How does nuclear charge affect ionisation potential
    b. How question numbers helps to determine the shapes of the orbitals.

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