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

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

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

Answer any **TEN** questions

1. Define hybridisation.
2. What is resonance energy?
3. What is elimination reaction. Give an example.
4. 3^o - butyl chloride undergoes SN1 reaction while methyl chloride follows SN2. explain.
5. Define polarising power.
6. What is Bents rule.
7. Define Green chemistry.
8. Write the limitations of green chemistry.
9. Suggest a safety measure to handle acids in laboratory.
10. What is Thresh hold concentration.
11. What is solvation energy.?
12. Differentiate intermolecular and intramolecular hydrogen bonding.

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

Answer any **FIVE** questions

13. Describe the hybridisation and structure of benzene.
14. Explain the mechanism of E1 reaction.
15. What is Fajans rule. Explain the factors affecting the polarisation of an ion.
16. Explain the need for green chemistry. Give examples of green reactions.
17. Discuss the general precautions for avoiding accidents in laboratory.
18. Describe VSEPR theory. Using VSEPR theory discuss the shape of NH_3.
19. Discuss the molecular orbital theory. Draw the molecular orbital diagram of F_2.

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

Answer any **THREE** questions

20. Explain (i) Inductive Effect (ii) resonance effect (iii) Hyperconjugation
21. Describe (i) Hofmann and Saytzeff rule (ii) SNi mechanism.
22. Explain Born-Haber cycle and its application.
23. Explain the twelve principles of Green Chemistry.
24. Discuss in detail the various first aid techniques.

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