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

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

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

Answer any **TEN** questions

1. What is dehydrohalogenation reaction.
2. How is chloroprene prepared?
3. What happens when calcium carbide is treated with water?
4. How does acetylene react with $H_2O/H_2SO_4/H_gSO_4$.
5. What are extensive and intensive properties?
6. Write the first law of thermodynamics.
7. Define enthalpy of reaction.
8. Define bond energy.
9. What is accuracy?
10. Define significant figures.
11. What is zeroth law of thermodynamics?
12. Define heat of formation.

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

Answer any **FIVE** questions

13. Write a note on peroxide effect.
14. What happens when (a) acetylene reacts with water. (b) oxidation of acetylene. (c) acetylene is polymerised.
15. Derive Joule Thomson coefficient and inversion temperature.
16. Describe the variation of enthalpy of reaction with temperature .
17. Discuss the various types of errors in chemical analysis.
18. Derive an expression for w,q.dU,dH for isothermal expansion of an ideal gas.
19. Explain (a) Heat of sublimation (b) Heat of neutralisation (c) Heat of combustion.

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

Answer any **THREE** questions

20. Explain (a) allylic substitution by NBS. (b) stability of conjugated dienes.
21. Discuss (a) acidity of acetylene (b) ozonolysis of acetylene
22. Derive a relationship between Cp and Cv.
23. What is bond dissociation energy. How it is calculated from thermochemical data.
24. Explain the various methods of expressing precision.

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