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

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

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

Answer any **TEN** questions

1. Write the electronic configuration of oxygen atom.
2. Define bond order.
3. Draw the structure of BrF_3.
4. Name any two sulphide ores with formula.
5. State the applications of chromatography.
6. What is meant by Rf value?
7. State the first law of thermodynamics.
8. Define open system.
9. Name the hybridization takes place in methane.
10. Define optical activity.
11. Mesotartaric acid is optically inactive why?
12. What is hybridization?

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

Answer any **FIVE** questions

13. Write notes on (i) bonding (ii) antibonding
14. Explain the structure of IF_3
15. Distinguish between reversible and irreversible process.
16. Define entropy and list out the significances.
17. With neat diagram explain the functioning of paper chromatography.
18. Discuss the hybridization and geometry of C_2H_4 molecule.
19. Write note on optical isomerism of tartaric acid.

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

Answer any **THREE** questions

20. Using molecular orbital theory explain the formation of N_2 molecule.
21. Explain various stages involved in the extraction process of metals.
22. Deduce efficiency equation of a heat engine using carnot cycle.
23. How is anthracene prepared by Harworth synthesis?
24. Explain the geometrical isomerism of maleic and fumaric acid.

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