

Gurudas College
Internal Examination, 2020
Chemistry (Honours), Part – I

Paper: II (A+B)

F.M. – 50, Time – 2 hrs

(Answers should be brief and to the point. Each question carries five marks.)

Gr-A (Theory)

(Answer any five questions)

1. Write the definition of nuclear fusion reaction and give two examples. Why they are called thermonuclear reactions?
2. How n/p ratio can determine the stability and radioactivity of a nucleus?
3. Write the order of ionization potentials among the following and explain:
Li, Na, K, Rb, Cs.
4. Define lattice energy and write the concerned equation with meaning of all the terms used therein.
5. Which one is more soluble in water, NaF or RbI?
6. Write the geometry of the following molecule: CH₄, NH₃, CO₂.
7. Write the names of two acid base indicator used in the titration of HCl vs NaOH.
8. Why Electron Affinity of Cl > F?

Gr-B (Practical)

(Answer any five questions)

9. Write the concerned equations for borax bead test?
10. Write flame colours in flame tests for i. Na⁺ ii. Sr²⁺ iii. Ba²⁺ and iv. Ca²⁺
11. How will you detect SO₄²⁻ and Cl⁻ in aqueous solutions?
12. Write the reagents used and concerned equations for fusion test?
13. Write the dry test for the detection of NO₃⁻.

14. Name the reagents used for the detection of Ni^{2+} and PO_4^{3-} by wet test.

15. Write the colours of the borax bead for the following: Co^{2+} , Ni^{2+} , Mn^{2+} .

16. How can you detect CrO_4^{2-} ?