

Government General Degree College, Dantan-II

1st Semester B. Sc (H) Internal Examination-2021

Subject: Chemistry

Paper: GE-1

F.M: 20

Time: 1h

Answer the following questions (*any ten*)

10×2

1. Write four quantum numbers for valence electron of chromium atom.
2. State postulates of Bohr atomic model.
3. Calculate 2nd Bohr radius for H atom.
4. State Hund's rule. Using this law, calculate the number of unpaired electron of phosphorous.
5. Compare the first ionization energy of Na and Mg.
6. Both K⁺ and Cl⁻ are isoelectronic but size of K⁺ ion is less than that of Cl⁻ ion. – Explain.
7. Write down the differences between electron affinity and electronegativity.
8. What are transition elements? Is Zn a transition element?
9. Write conjugate acid and conjugate base of H₂O.
10. Explain Lux-Flood concept of acid and base.
11. Give example of acid and base in liquid ammonia solvent.
12. Draw resonance structure of nitrobenzene.
13. Formic is more acidic than acetic acid. – Explain.
14. Distinguish between homolytic and heterolytic bond fission.
15. Define enantiomer and diastereomer.
16. Draw R and S configuration of lactic acid.
17. Why meso tartaric acid is optically active?
18. Write short note on Geometrical isomer.
19. Write mechanism for SN¹ reaction.
20. write mechanism for E¹ reaction.