B.Sc. B.Ed SEM-I Examination: 2019

Course-GE01/02

Subject: Chemistry

Time: 2 Hours　　　　　　　**F.M. 50**

Answer any *ten* questions　　　　　　　　　　　　　　**(5 × 10 = 50)**

1. State the basic postulates of Bohr's theory on atomic structure.　　5

2. Write the electron distribution of Ca (At. No. 20) and Phosphorus (At. No. 15).　(2 ½ + 2 ½)

3. Why Helium (He) and Argon (Ar) are chemically inert?　　(2 ½ + 2 ½)

4. Why metallic character decreases when we move from left to right of a period?　5

5. Hydrogen occupies a unique position in the modern periodic table-Explain.　　5

6. Why the shape of ammonia is tetrahedral?　　5

7. Which of the following compounds has highest boiling point and why? HI, HF, HBr, HCl　5

8. Write IUPAC name of the following compounds.　　(1×5 = 5)

    (i)　　$CH_3CH(Cl)CH(Br)CH_3$

    (ii)　　$CHF_2CBrClF$

    (iii)　　$CH_3CH_2OCH_3$

    (iv)　　$CH_3CH_2COOCH_3$

    (v)　　CH_3COCH_3

9. Explain why:

    (i)　　CCl_4 has zero dipole moment but $CHCl_3$ has finite dipole moment.

    (ii)　　Grignard reagent is prepared in anhydrous condition.　　(2 ½ + 2 ½)

10. Which of the following compounds would be the best nucleophile and why?　　5

    CH_3S^-, CH_3O^-, CH_3SH

11. Explain inductive effect with example.　　5

12. Write a short note on Markonikoff and Anti-Markonikoff addition.　　5