2020
B.Sc
2nd SEMESTER EXAMINATION
CHEMISTRY (HONOURS)
Inorganic Chemistry I
PAPER – C3T + C3P

FULL MARKS: 30 **TIME: 2HRS**

ANSWER ANY **ONE** QUESTION FROM EACH PART

PART-A: C3T (THEORY) MARKS 20

1. Explain the Lewis acid base concept with proper examples. Arrange the following compounds in increasing order of acidity/basicity:

i) BF3, BBr3, BCl3; ii) H3N, F3N, (CH3)3N

2. Draw the shapes of s, p, d and f orbitals. What is Pauli's Exclusion principle?

3. What is HSAB rule in acid base theory? What are factors that determine the harness/softness of acids and bases?

4. Write down the limitations of Bohr's theory. What is the significance of Hund's rule in atomic structure?

5. Explain the influence of complex formation on redox potential with proper example.

PART-B: C3P (PRACTICAL) MARKS 10

1. Write down the principle of quantitative estimation of Fe(II) using standard KMnO4 solution.

2. Write down the principle of quantitative estimation of Fe(II) and Fe(III) in a mixture using K2Cr2O7 solution.

3. Write down the principle of quantitative estimation of Cr(III)) using K2Cr2O7 solution.

Please send the PDF of the answer script to c3thons@gmail.com