Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 20

M.Sc. (Chemistry) (2018 & Onwards) (Sem.-1)

INORGANIC CHEMISTRY-I

Subject Code : CHL-401-18

M.Code : 75113

Time : 3 Hrs. Max. Marks : 70

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains EIGHT questions carrying FIVE marks each and students have to attempt any SIX questions.
3. SECTION-C will comprise of TWO compulsory questions with INTERNAL CHOICE in both these questions. Each question carries TEN marks.

SECTION-A

Answer briefly :

1) What are Coordination Complexes?

2) Explain Crystal field splitting energy.

3) What are High Spin Complexes?

4) What is the Symbiosis?

5) What are Pi Acceptors?

6) What are selection rules for d-d transitions?

7) Explain tetrahedral crystal field.

8) What is the term Symbol?

9) What is Paramagnetism?

10) What is Stereochemistry?

SECTION-B

11) What is Werner's Theory?

12) Explain stability of complex.

13) What is the Jahan Teller effect?

14) Explain Orgel diagram of d9 in tetrahedral field.

15) Explain the Semi bridging in carbonyls.

16) Explain the Charge Transfer Spectra.

17) Explain the pi acceptor character of N2 in terms of MOEL.

18) Explain the quenching of orbital angular momentum.

SECTION-C

19) Explain the effect of spin-orbit coupling splitting.

OR

Explain the Tenabe sugano diagram.

20) Explain the first order and second order Zeeman Effect.

OR

Explain the valence bond theory.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.