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Total No. of Pages: 02

Total No. of Questions: 11

M.Sc. (Chemistry) (Sem. – 2)

INORGANIC CHEMISTRY-II

M Code: 75981

Subject Code: CHL-411-18

M. Code: 75981

Date of Examination: 12-12-2022

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 is COMPULSORY consisting of TWO questions with internal choice carrying TEN marks each.
- 4.

SECTION A

1. Write briefly:
 - a) What are borazines?
 - b) Explain Zintl ions.
 - c) What is capping rule?
 - d) What is the Grignard reagent?
 - e) What is catenation?
 - f) What is nuclear binding energy?
 - g) Explain non radioactive isotopes.
 - h) What is Q value?
 - i) What are isopolyanions?
 - j) What are metallocene carboranes?

SECTION B

2. Explain the isolobal relationship.
3. Explain exceptions of 18 electron rule.

4. Explain the inner sphere reactions.
5. Explain diborane and reactions of formation.
6. Explain closo, arachno borane.
7. Explain the radioactive series-Uranium.
8. Explain the trans effect.
9. Explain the transmutation of elements.

SECTION C

10. Explain the G.M. Counter method.

OR

Explain the Wade rules.

11. Explain the purity and strength of radio isotope.

OR

Explain the preparation and structure of boranes.

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