Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Sc Non Medical (2018 Batch) (Sem.–1)

INORGANIC CHEMISTRY

Subject Code : BSNM-102-18

Paper ID : [75743]

Time : 3 Hrs. Max. Marks : 50

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying ONE marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

1. Define the following :

a) De Broglie relationship between wave property and particle property

b) Condition for a function to be normalized

c) Electronegativity

d) van der Waal radius

e) Slater formula for effective nuclear charge

f) Polarizing power

g) Debye

h) Bond angle

i) Lattice energy

j) Born-Lande equation

SECTION-B

2. What is Aufbau's principle? Discuss its limitation.

3. What is screening effect? How does it govern the ionization energy of an atom?

4. What is Hess's law? Give schematic representation of Born-Haber cycle for the formation of NaCl.

5. What are Fajan's rules for covalent character? Explain low melting point of $BeCl_2$ in comparison to other alkaline earth metal.

6. Discuss wurtzite structure of Zinc Sulphide.

SECTION-C

7. Derive Schrodinger's wave equation. Describe significance of ψ^2.

8. Describe similarities between valence bond theory and molecular orbital theory. Give molecular orbital energy level diagram of CO.

9. Describe various types of weak interactions.