

Examination Oct. 2023
B.Sc. Part I Sem-I
Chemistry Paper I
Sub Code- 88180

Date: 06/11/2023

Time: 2.30 a.m. to 4.30 p.m.

Total Marks: 50

Q1. Fill in the blanks.

(10)

- 1) Principal quantum number represents -----
a) Energy of electron b) Spin of electron
c) Orientation of orbitals. d) Shapes of orbitals.
- 2) Which of the following is not an alkaline earth metal?
a) Cs. b) Ra. c) Ba. d) Ca
- 3) Increase in ----- increases covalent character of an ionic bond.
a) Polarity b) Polarization c) Ionic character d) Size.
- 4) K₂S is isomorphous with -----.
a) CaO. b) Na₂S. c) CaCl₂. d) MgCl₂
- 5) According to Lewis a covalent bond is formed by -----.
a) Pairing of electrons b) Overlapping of atomic orbitals.
c) Sharing of proton pair d) Sharing of an electron pair.
- 6) Atomic number of an element indicates -----.
a) Quantum number b) Number of neutrons
c) Number of orbitals d) Number of protons.
- 7) Which of the following has maximum polar character.
a) C-Br. b) C-S. c) C-I. d) C-F.
- 8) Boron group elements belongs to group -----.
a) 13. b) 14. c) 15. d) 12
- 9) As atomic size increases, ionization potential
a) increases b) decrease
c) first increases then decrease d) remain constant
- 10) Geometry of molecule depends on.....
a) type of overlap b) type of hybridizing
c) nature of overlap d) types of orbitals

Q.2. long Answers Questions. (Any Two).

(20)

- 1) Explain details Lewis acids and bases Concept.
- 2) What is Quantum Numbers. explain any Two.
- 3) Give schematic representation of Born-Haber cycle.

Q.3. Short Answers Questions.(Any four)

(20)

- 1) Characteristics of Ionic Bond.
- 2) Explain Arrhenius Concept with suitable examples.

- 3) Write short note on valence bond theory.
- 4) Polarizing power and polarizability.
- 5) What are p - block elements ? Discuss the p-block elements.
- 6) Common Oxidation state of group 1(IA) $1+$ while that of group 2(IIA) $2+$ why?
