term



Examinations-I

Name of the Programme: BSc 1st SEM Chemistry

Name of the Subject: Inorganic Chemistr-1

Subject Code: CHE101

Part-A

Answer all the questions. Each Carries 1 mark 1M X 5=5M

- 1. How does the size of atoms change as we move down a group in the periodic table?
- 2. How Sommerfield explained fine structure of hydrogen spectrum?
- 3. What is De Broglie wavelength equation?
- 4. The atom will have different radii depending on the type of the chemical bond, what are they?
- 5. Write the Schrödinger wave equation.

Part-B

Answer either A or B short answer question. 5 M x 1=5M

6 A) Why don't electrons fall into the nucleus despite the attractive force between their negative charge and the nucleus's positive charge?

OR

B) Discuss Heisenberg uncertainty principle. Explain its significance

Part-C

Answer either A or B long answer questions. 10M x 1=10M

7 A) Outline Bohr's atomic theory, focusing on its postulates and contributions. Highlight briefly the limitations of the model and how later theories addressed these issues.

or

B) i) What is ionization enthalpy? Explain how it varies across periods and down groups in the periodic table.

ii) Why does Be have a higher ionization enthalpy than B, and N have a higher ionization enthalpy than O?