Quadrant IV – Assessment (Module –wise)

Programme: Bachelor of Science (First Year)

Subject: Chemistry

Paper Code: CHC-101

Paper Title: Inorganic Chemistry and Organic Chemistry (Section A)

Unit: 2

Module Name: Statement of Born-Landé Equation for Calculation of Lattice Energy, Born-Haber Cycle and its Applications

Module No: 18

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MCQ

1. Which of the following statement is correct, considering the Born-Landé equation?
    a) Lattice energy decreases as ions come into closer contact
    b) Lattice energy does not depend on the charge of the ions
    c) Lattice energy depends on the charge of the ions
    d) None of the above

2. Value of which of the following entity cannot be obtained by experiment directly?
    a) Electron affinity
    b) Dissociation energy
    c) Sublimation energy
    d) Lattice energy

Short Answer – I (short notes - 20 to 50 words)

1. Give Born-Landé equation and explain the terms involved in it.

2. What is Born-Haber cycle.

Short Answer – II (extended – 50 to 100 words)

1. Compute the lattice energy of NaCl using Born-Landé equation.

2. Explain giving examples how some of the properties of ionic solids can be explained on the basis of lattice energy.