

SHIVAJI COLLEGE, UNIVERSITY OF DELHI

DEPARTMENT OF CHEMISTRY

INTERNAL TEST-I (Academic Year 2023-24)

Name of the Course : B.Sc. (H) Chemistry

Semester : I

Name of the Paper: Atomic Structure and Chemical Bonding (UPC: 2172011101)

Faculty Name: Dr. Sunil Yadav

Duration: 1 Hour

Maximum Marks: 12

Date of Test: 07.11.2023

Attempt any four questions. All question carry equal marks.

1. Write short notes on VSEPR theory. (3)
2. Predict the hybridization, geometry and shape of the following molecules/ions: (3)
 - (i) PCl_5
 - (ii) SO_4^{2-}
 - (iii) SF_4
 - (iv) I_3^-
3. What is Bent's rule? Explain. (3)
4. What is LCAO? Explain by taking suitable example. (3)
5. Discuss the formation of H_2 molecule on the basis on MOT. (3)
6. He_2 exist or not? Explain. (3)

