



Maharishi University of Information Technology, Lucknow

School of Sciences

1-Class Test Even Semester -2025-26

Student Name:

Course/Semester: B. Sc. Semester VI

Branch: Section A

Subject / Paper's Name: Atomic and Molecular Physics

M.M.: 05

Date: 28/03/2026

Paper Code: BPHY602

Note: Do any ten questions. Each question carries equal marks.

1. What causes Hyperfine Splitting?
2. What is condition for J, I for splitting?
3. What is selection rule for Hyperfine Splitting?
4. Application of Hyperfine structure?
5. What causes Isotope effect?
6. Give examples for Isotope effect.
7. What are Normal and Inverted items?
8. Who gave Hyperfine Splitting?
9. Who gave Isotope effect?
10. Define Lamb Rutherford Shift.
11. Give block diagram for Lamb Rutherford Shift.

Please write answer below
