

PROJECT GUIDELINE BOOKLET

Course Code: PHS-DC-MJ-503

Course Name: Quantum Mechanics and Applications

Semester: V

Project & Presentation: 20 Marks

Department of Physics

Gour Mahavidyalaya

1. Introduction

This project component aims to enhance conceptual understanding, analytical ability, and presentation skills in Quantum Mechanics. Students are expected to undertake theoretical, computational, or application-based projects aligned with the syllabus.

2. Suggested Project Topics

- Wave Packet Dynamics and Uncertainty Principle
- Particle in One-Dimensional Square Well
- Quantum Harmonic Oscillator
- Hydrogen Atom and Orbital Angular Momentum
- Zeeman and Stark Effects

3. Structure of the Project Report

- Cover Page (Title, Name, Roll No., Registration No., Supervisor)
- Certificate (Signed by Supervisor)
- Acknowledgement
- Abstract (200–300 words)
- Introduction and Theoretical Background
- Methodology / Mathematical Derivations
- Results and Discussion (Graphs/Plots if applicable)
- Conclusion
- References (Standard textbooks/journals)

4. Formatting Guidelines

- Font: Times New Roman, Size 12
- Line spacing: 1.5
- Page margin: 1 inch on all sides
- Length: 15–25 pages
- Proper equation formatting and figure labeling required

5. Evaluation Scheme (20 Marks)

Component	Marks
Understanding of Theory	5
Mathematical Derivation / Analysis	5
Presentation & Viva	5
Report Quality & Originality	5