



Date: 03-04-2019
Time: 09:00-12:00

Dept. No.

Max. : 100 Marks

PART - A

Answer any **FOUR** questions

(4×10=40)

1. Define Photoelectric effect.
2. Draw an electron microscope and name the parts.
3. Write down the time dependent and time independent Schrodinger equation.
4. What do you mean by degeneracy?
5. Differentiate inertial and non-inertial frames of reference.
6. State Mach's principle.
7. State the postulates of general theory of relativity.
8. List any two properties of the Hermitian operator.

PART - B

Answer any **THREE** questions

(3×20=60)

9. Derive the uncertainty relation.
10. (a) Give the postulates of Quantum Mechanics.
(b) What do you mean by normalisation of a wave function.
11. Derive Einstein's mass-energy relation.
12. Describe Davisson - Germer experiment and give its importance.
13. With a neat sketch explain Michelson-Morley experiment and discuss its results.
14. Discuss rigid rotator problem with the help of Schrodinger equation.
