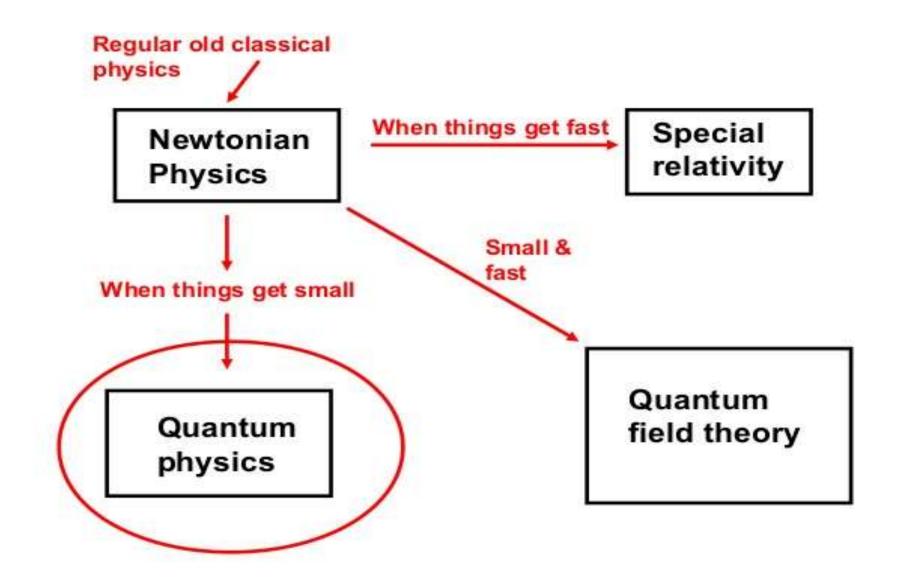
### **UNIT-II**

# **QUANTUM PHYSICS**

#### **ORIGIN OF QUANTUM PHYSICS**



## Why Quantum Physics?

- Classical mechanics (Newton's mechanics) and Maxwell's equations (electromagnetic theory) can explain MACROSCOPIC phenomena such as motion of billiard balls or rockets.
- Quantum mechanics is used to explain microscopic phenomena such as photon-atomic scattering and the flow of electrons in a semiconductor. The behavior of a "microscopic" particle is different from that of a classical particle:
  - in some experiments it resembles the behavior of a classical wave (not localized in space)
  - in other experiments it behaves as a classical particle (localized in space)

## **ORIGIN OF QUANTUM PHYSICS**

