

# PHYSICS (Model Paper)

Class XI

Total no. of questions: 30

Max. Marks: 70

## Long answer type ( 5 x 4)

**Q1** Derive the expression for the, Path or trajectory, time of flight and horizontal range when a body is projected from a certain height in the direction of horizontal.

**Or**

What is centripetal acceleration, derive an expression for it.

**Q2** Discuss the laws of friction, derive the expression for co-efficient of friction in terms of angle of repose.

**Or**

What is angle of banking, derive the expression for angle of banking on a curved road with certain co efficient of friction

**Q3** Discuss and Derive Bernauli's Equation?

**Or**

What are the modes of heat transfer, Discuss Conduction, Convection and Radiation?

**Q4** Discuss SHM as a special case of circular motion and derive expression for displacement, velocity and acceleration of a body executing S.H.M

**Or**

Derive the expression for the frequency and time period of a body executing oscillations in case of a stretched string.

## Short answer type (3 x 8)



