

2227

## SECOND YEAR B. Sc. MATHEMATICS

### PAPER – III MECHANICS

**Duration: 3 Hours**

**Max. Marks: 75**

#### UNIT – I

Equilibrium of bodies under three or more forces, Friction, common category.

#### UNIT –II

Virtual work, Projectile on inclined plane and Impact.

#### UNIT – III

Velocity and Accelerations (Tangential, normal, radial, transversal), Rectilinear motion, Hooke's law and motion of horizontal and vertical strings.

#### UNIT –IV

Constrained motion (circular and cycloidal), motion under resisting medium (resistance varies as velocity and square of velocity).

#### UNIT –V

Fluid pressure and thrust on immersed plane surfaces. Center of pressure.

#### References:

1. S. L. Loney : Statics, Macmillan and Company, London.
2. R.S. Verma : A Text book of Statics ( Pothishala)
3. Ray & Sharma : A Text book of Hydrostatics
4. N.Sharma : A Text book of Dynamics.
5. M Ray : A Text book of Dynamics.
6. Bhargava & Agrawal : Gati Vigyan
7. Gokhroo, Saini : Uchch Gati Vigyan
8. Gokhroo & Others : Hydrostatics( Hindi Ed.)
9. Gokhroo & Others : Statics ( Hindi Ed.)
10. Bhargava & Others : Hydrostatics (Hindi Ed.)
11. Bhargava & Others : Statics (Hindi Ed.)