

AMTE-21 MECHANICS OF TEXTILE MACHINERY

UNIT I EQUATIONS OF FORCES

- 1.1 Motion and energy;
- 1.2 Energy stored in rotating masses.

UNIT-2 CLUTCHES AND BRAKES

- 2.1 Types, application in textile machines;
- 2.2 Gears, gear trains;
- 2.3 Power transmission- different modes,
- 2.4 Advantages and limitations, applications

UNIT-3 DIFFERENTIAL AND VARIABLE SPEED DRIVES

- 1.1 Principles,
- 1.2 Application in textile machines;
- 1.3 Design of cone drums
- 1.4 Piano feed regulation,
- 1.5 Roving machine builder mechanism.

UNIT-4 FRICTION

- 4.1 Calculations;
- 4.2 Bearings,
- 4.3 Design of drive transmitting shafts,
- 4.4 Balancing of rotating masses

UNIT-5 DESIGN OF WINDER DRUMS

- 5.1 Kinematics of shedding;
- 5.2 Design of tappets;
- 5.3 Beat up force, sley eccentricity;
- 5.4 Power for picking

Reference Book:

1. Rengasamy R. S., "Mechanics of Spinning Machines", NCUTE, Ministry of Textiles, Govt. of India, 2000.