

THERMODYNAMICS III: MTB31BI & MTB32BI

Syllabus

Unit 1 Entropy of Vapours and Gases.

Unit 2 Ideal Gas Power Cycles:

Carnot Cycle.

Brayton Cycle.

Otto Cycle.

Diesel Cycle.

Unit 3 Reciprocating Air Compressors.

Unit 4 Internal Combustion Engines.

Unit 5 Refrigeration.

MECHANICAL ENGINEERING DESIGN III: MED31BI & MED32BI

Syllabus

Unit 1 Design procedure.

Unit 2 Detailed Gear Stressing.

Unit 3 Belt and Chain drives.

Unit 4 Clutches and Braking systems.

Unit 5 Springs.

Unit 6 Frames castings and enclosures.

Unit 7 Engineering Tolerancing.

STRENGTH OF MATERIALS III MSM31BI & MSM32BI

Syllabus

Unit 1 Temperature Stresses.

Unit 2 The forces in simple trusses.

Unit 3 Shear force and Bending moments.

Unit 4 Second moment of area.

Unit 5 Bending Stresses.

Unit 6 Strain energy due to direct stresses.

Unit 7 Cateraries.

Unit 8 Shear Stress in beams.

Unit 9 Fatigue.

FLUID MECHANICS III MFM31BI & MFM32BI

Syllabus

Unit 1 Flow in pipelines, parallel pipe lines, power transmission by pipe lines.

Unit 2 Flow under variable head.

Unit 3 Viscous flow.

Unit 4 Reciprocating pumps.

Unit 5 Force exerted by a moving fluid.

Unit 6 Free and forced vortex motion.

Unit 7 Dimensional analysis.

MECHANICS OF MACHINES III MEM31BI & MEM32BI

Syllabus

- Unit 1 Gear tooth Calculations.
 - Simple and Compound Gear Train
 - Simple and Compound Epicyclic Gear Train.
- Unit 2 Velocities in mechanisms.
 - Acceleration in Mechanisms.
- Unit 3 Balancing of shaft and Rotating Machine Parts.
 - Balancing of Reciprocating Machine parts.
 - Balancing of V-Engins.