

II Year II Semester

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17ME413

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COMPUTER AIDED MACHINE DRAWING

PART-A

UNIT1:

Sections of Solids: Sections of Pyramids, Prisms, Cubes, Tetrahedrons, Cones and Cylinders resting only on their bases (No problems on, axis inclinations, spheres and hollow solids), True shape of sections. Orthographic Views: Conversion of pictorial views into orthographic projections, of simple machine parts with or without section. (Bureau of Indian Standards conventions are to be followed for the drawings) Hidden line conventions, Precedence of lines.

UNIT 2:

Thread Forms: Thread terminology, sectional views of threads. ISO Metric (Internal & External) BSW (Internal & External) square and Acme. Sellers thread, American Standard thread.

Fasteners: Hexagonal headed bolt and nut with washer (assembly), square headed bolt and nut with washer (assembly) simple assembly using stud bolts with nut and lock nut. Flanged nut, slotted nut, taper and split pin for locking, counter sunk head screw, grub screw, Allen screw.

PART-B

UNIT 3:

Keys & Joints: Parallel key. Taper key, Feather key, Gibhead key and Woodruff key Riveted Joints: Single and double riveted lap joints, butt joints with single/ double cover straps (Chain and Zigzag, using snap head rivets), cotter joint (socket and spigot), knuckle joint (pin joint) for two rods.

UNIT 4:

Couplings:

Split Muff coupling, protected type flanged coupling, pin (bush) type flexible coupling, Oldham's coupling and universal coupling (Hooks' Joint) 08 Hours

PART - C

Assembly Drawings

(Part drawings should be given)

1. Plummer block (Pedestal Bearing)
2. Rams Bottom Safety Valve 3.1.C. Engine connecting rod
4. Screw jack (Bottle type)
5. Tailstock of lathe
6. Machine vice
7. Tool Head of a shaper 18 Hours

Text Books:

1. 'A Primer on Computer Aided Machine Drawing-2007', Published byVTU, Belgaum.
2. 'Machine Drawing', N.D.Bhat&V.M.Panchal

Reference Books:

1. 'A Text Book of Computer Aided Machine Drawing', S. Trymbaka Murthy, CBS Publishers, New Delhi, 2007
2. '.Machine Drawing', K.R. Gopala Krishna, Subhash Publication.
3. 'Machine Drawing with Auto CAD', GoutamPohit&GouthamGhosh, 1st Indian print Pearson Education, 2005
4. Auto CAD 2006, for engineers and designers'. Sham Tickoo. Dream tech 2005
5. 'Machine Drawing', N. Siddeshwar, P. Kanniah, V.V.S. Sastri, published by Tata McGraw Hill.2006