15MT64

Sixth Semester B.E. Degree Examination, June/July 2019 (Mechatronics Engineering)

## COMPUTER AIDED MACHINE DRAWING

Time: 3 Hours

Max. Marks: 80

Note: 1. Answer any ONE question from each of the parts A, B and C.

2. Use First angle projections only.

3. If any data is missing it may be suitably assumed and mentioned.

4. All the calculations should be on the answer sheet supplied.

5. All the dimensions are in mm.

6. Drawing instruments may or may not be used for sketching.

7. Part C assembly view should be in 3-D and other views in 2-D.

## Part - A

- 1. A triangular pyramid of base sides 50mm and axis 80mm long stands vertically with its base on the HP, such that one of the base edges is perpendicular to VP. A sectional plane perpendicular to VP and parallel to one of the slant edges of the pyramid passes at a distance of 25mm from it. Draw the sectional top view and true shape of section. Also determine the inclination of the sectional plane with the reference plane. (20 Marks)
- 2. Draw (i) the sectional view from the front and (ii) the view from above of a bearing bracket shown in Fig. 1 (20 Marks)

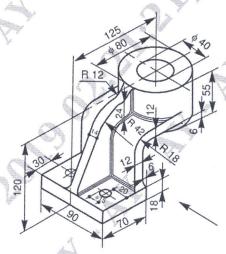


Figure 1

## Part - B

- 3. Draw the following view of a KNUCKLE JOINT used to joining two rods of diameter 25mm
  (a) Sectional front view (b) Top view. (20 Marks)
- 4. Draw sectional front view and side view of a Pin type flexible Coupling to connect two rods of diameter 20mm, indicate all dimensions. (20 Marks)

## Part - C

- 5. Figure 2 shows the details of a Plummer block. Assemble the parts of the Plummer block and show the following views.
  - a. Half sectional front view showing the right half in section
  - b. Top view (40 Marks)
- **6.** Figure 3 shows the details of a screw jack. Assemble the parts of the screw jack and show the following views.
  - a. Half sectional front view showing the right half in section
  - b. Top view

(40 Marks)

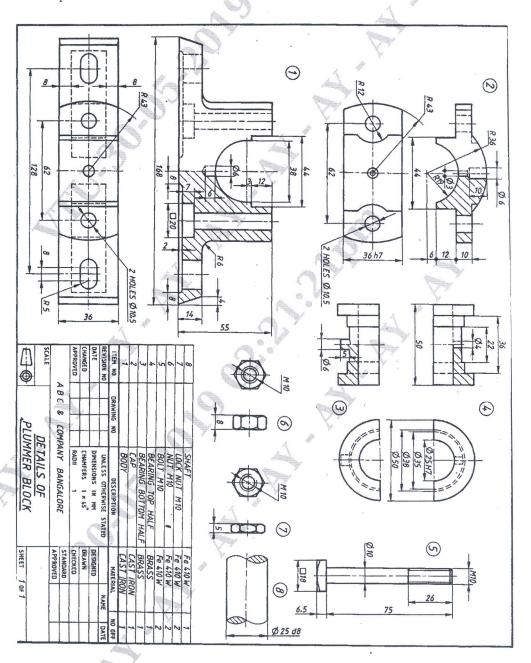


Figure 2:- Plummer Block

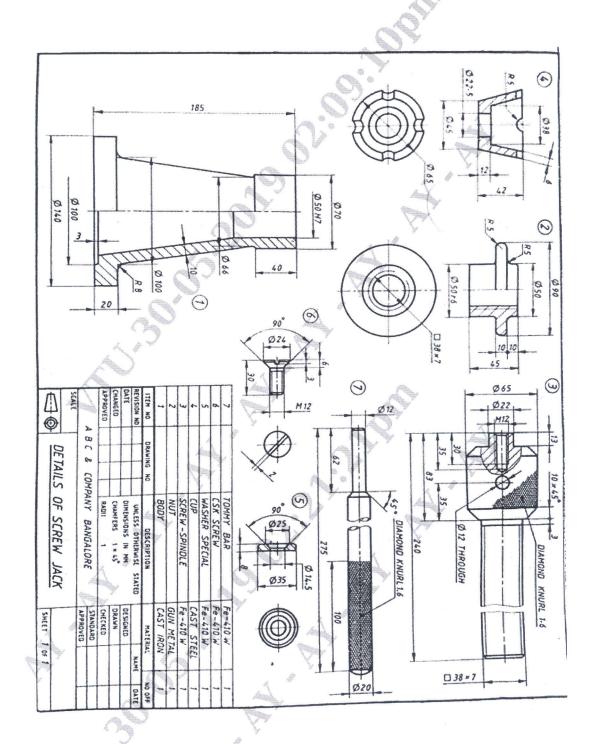


Figure 3:- Screw Jack