

**II B.Tech. I Semester Regular Examinations, November -2005**  
**MACHINE DRAWING**  
**( Common to Mechanical Engineering, Mechatronics, Production Engineering**  
**and Aeronautical Engineering)**

**Time: 3 hours**

**Max Marks: 80**

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1. Answer any two of the following by drawing proportional diagrams in two views.  
[2 x 15= 30]
  - (a) Draw two views of following keys with a shaft diameter of 30 mm
    - i. Saddle key
    - ii. Sunk key
    - iii. feather key
  - (b) Draw Double riveted chain lap joint to join plates of thickness of 10 mm.
  - (c) Draw spigot and socket type of joint to connect 30 mm diameter pipes.
  - (d) Draw two views of foot step bearing for supporting a shaft of 30 mm diameter.
2. Figure 1 shows details of the Machine vice. [50]  
Assemble and draw the following:
  - (a) Half sectional view
  - (b) Top view

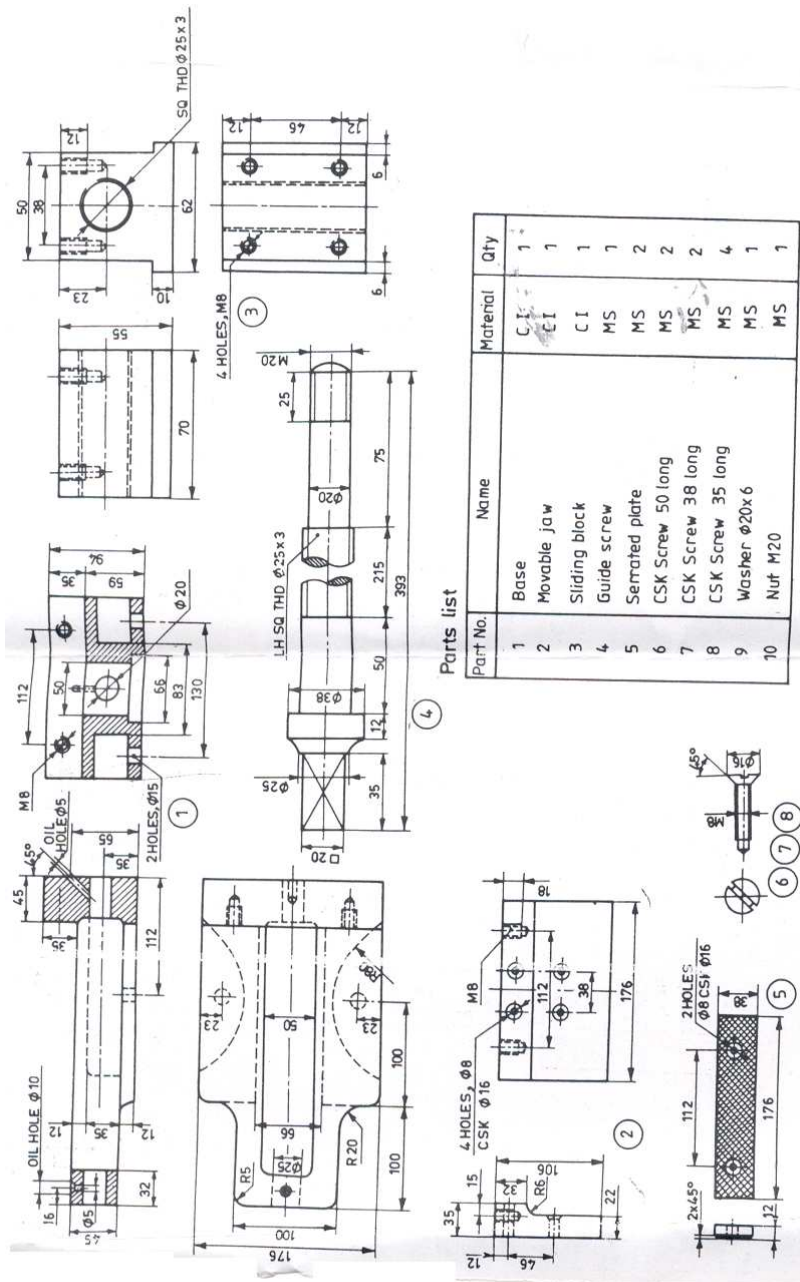


Figure 1:

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1. Answer any two of the following by drawing proportional diagrams in two views.  
[2 x 15=30]

- (a) Draw the two views of the plummer block for supporting a shaft of diameter 50mm.
- (b) Draw Double riveted Zig-Zag lap joint to join plates of thickness of 12 mm.
- (c) Draw the two view of the muff coupling to connect two shafts of 60 mm diameter.
- (d) Draw the two views of flanged joints used for cast iron steam pipes of diameter 80 mm.

2. Figure2 shows details of the “Screw jack”. [50]

Assemble and draw the following:

- (a) Half sectional front view
- (b) Top view

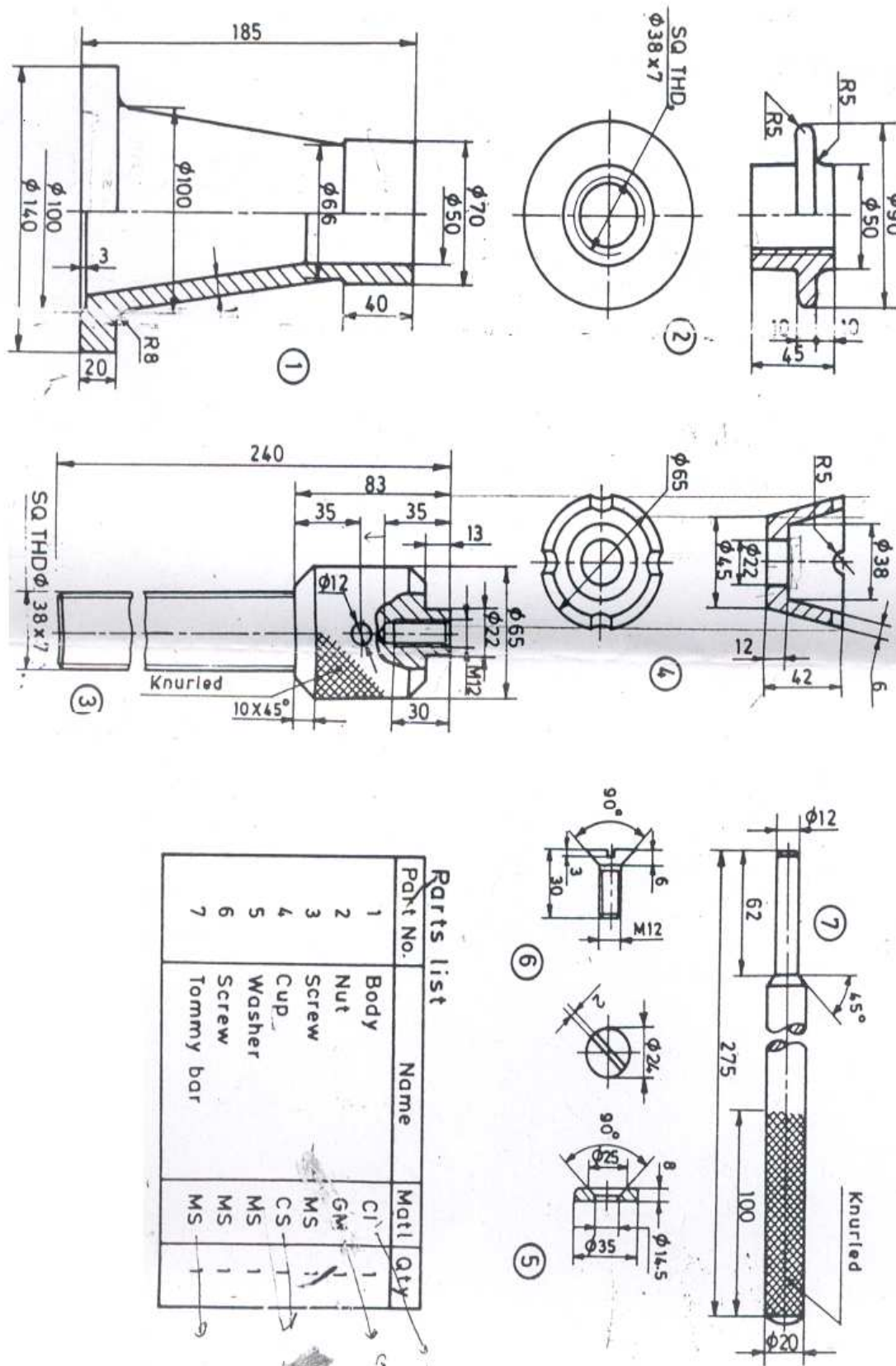


Figure 2:

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1. Answer any two of the following by drawing proportional diagrams in two views.  
[2 x 15=30]

- (a) Draw two views of knuckle joints with properties to connect two shafts of 30 mm.
- (b) Draw single riveted double strap butt joint to join plates of thickness of 12mm.
- (c) Draw spigot and socket type of pipe joint to connect 25 mm diameter pipes.
- (d) Draw Bushed pin type flang coupling to connect two shafts of 40 mm diameter.

2. Figure 3 shows details of “Eccentric” . Assemble and draw [50]

- (a) Half sectional view
- (b) Top view

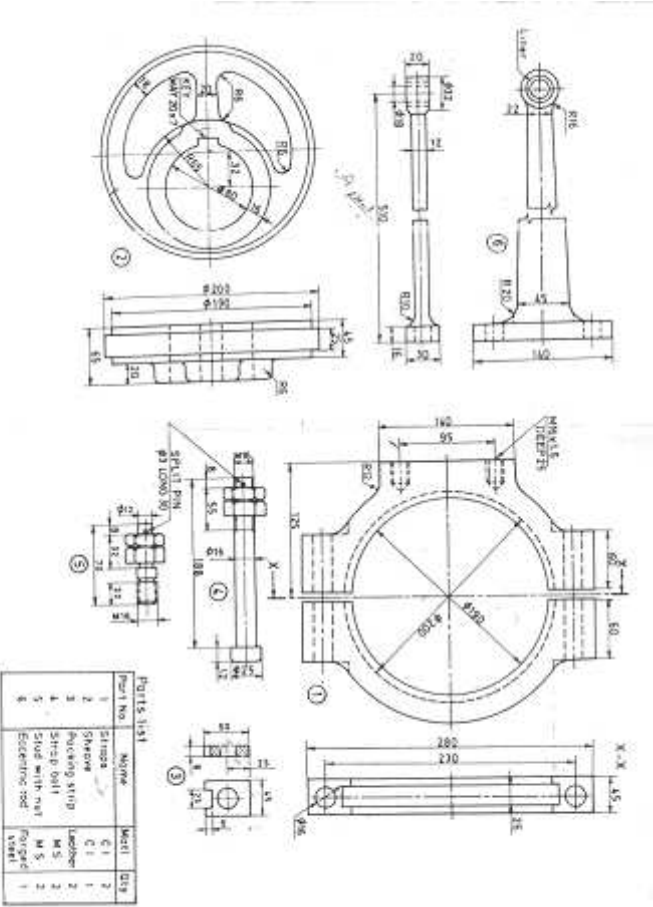


Figure 3:

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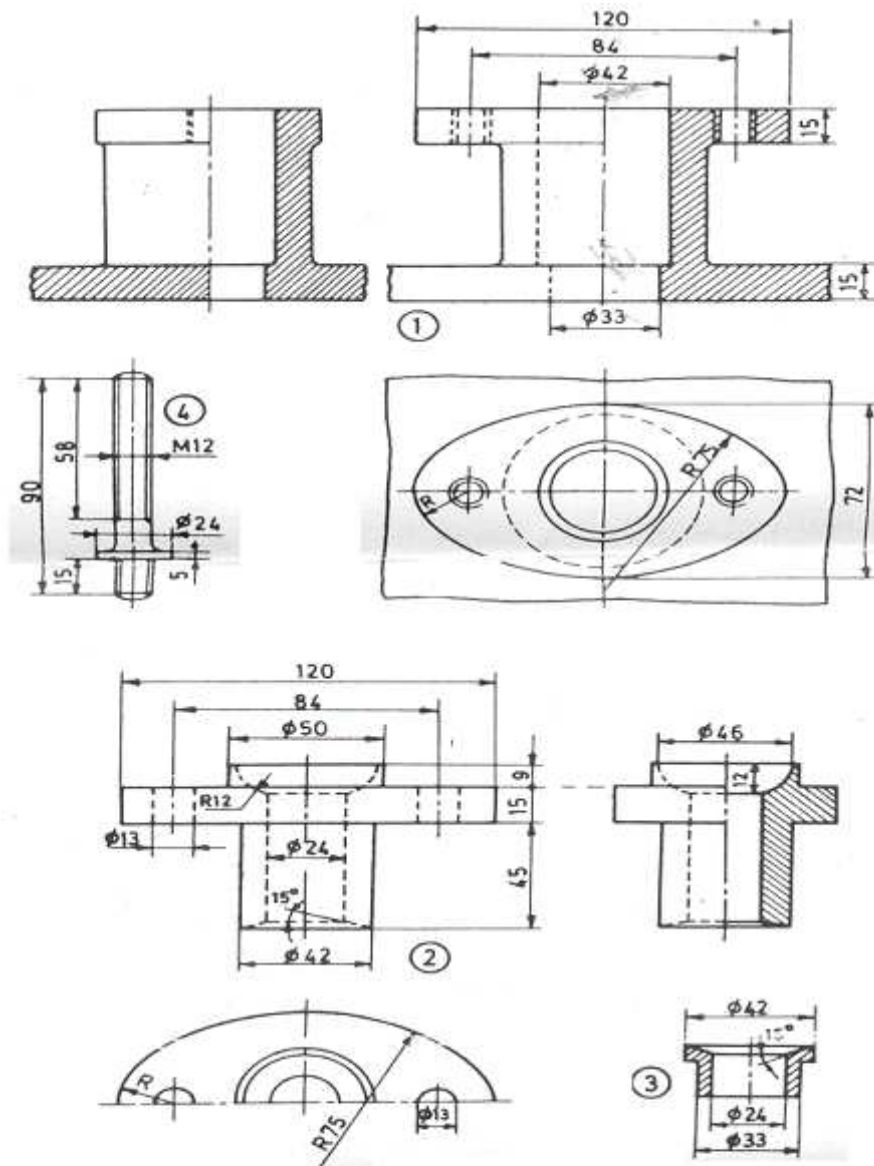
1. Answer any two of the following by drawing proportional diagrams in two views.  
[2 x 15=30]

- (a) Draw two views of cotter joint with properties to connect two shafts of 30 mm.
- (b) Draw the protected flange coupling to connect two shafts of 60 mm diameter.
- (c) Draw
  - i. Half sectional front view and
  - ii. Top view of a bushed journal bearing for supporting a shaft of diameter 25 mm
- (d) Draw double rivetted, double strap, zig-zag butt joint, to join plates of thickness 10mm.

2. Figure 4 shows details of the stuffing box. [50]

Assemble and Draw.

- (a) Half sectional front view.
- (b) Top view
- (c) Side view



## Parts list

| Part No. | Name     | Matl  | Qty |
|----------|----------|-------|-----|
| 1        | Body     | CI    | 1   |
| 2        | Gland    | Brass | 1   |
| 3        | Bush     | Brass | 1   |
| 4        | Stud     | MS    | 2   |
| 5        | Nut, M12 | MS    | 2   |

Stuffing box

Figure 4: