

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY—MARCH, 2013

**MACHINE DRAWING**

(Common to ME and AU)

[Time : 3 hours

(Maximum marks : 100)

- [Note : 1. All dimensions are in mm.  
2. First angle projection method is to be followed.  
3. Missing data if any may be suitably assumed.  
4. Both sides of the drawing sheet may be used.  
5. Sketches to be accompanied.]

Marks

UNIT – I

- I Draw any two locking arrangements of nuts. Take diameter of the bolt as 10 mm. 15

OR

- II Draw two views of a single riveted double strap butt joint. Take thickness of plates as 9 mm. Dimension the drawing in terms of diameter of the rivet. Draw atleast 3 rivets in a row. Use snap head rivets. 15

UNIT – II

- III Isometric view of a knuckle joint is shown in figure 1. Draw the following views :  
(a) Elevation (Top half in section). 20  
(b) Top view. 10

OR

- IV Exploded isometric view of an unprotected type flange coupling is shown in figure 2. Arrange the coupling and draw the following views :  
(a) Full sectional elevation. 20  
(b) Left hand side view. 10

UNIT – III

- V Exploded view of a foot step bearing is shown in figure 3. Assemble the parts and draw following views :  
(a) Full sectional front view. 25  
(b) Top view. 15

OR

VI Isometric view of stuffing box is shown in figure 4. Draw the following views :

- (a) Full sectional elevation. 25  
 (b) Top view. 15

UNIT - IV

VII Draw the following elementary welding symbols :

- (a) Fillet  
 (b) Square butt  
 (c) Single V butt  
 (d) Edge  
 (e) Spot.

(5x3=15)

OR

VIII Layout of a piping system is shown in figure 5. Prepare a single line orthographic layout using symbols. (10 symbols)

15

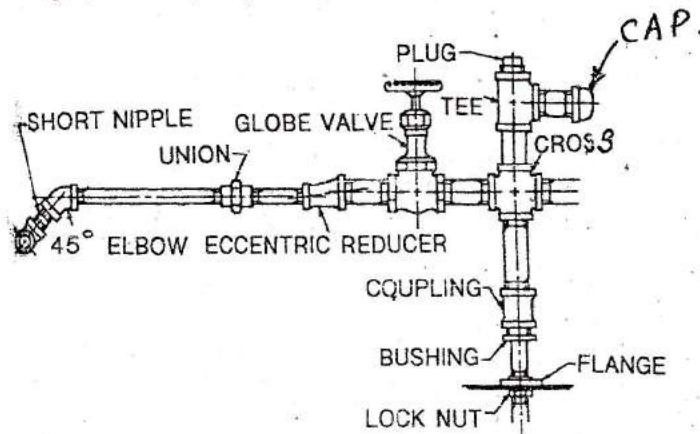


Fig. 5

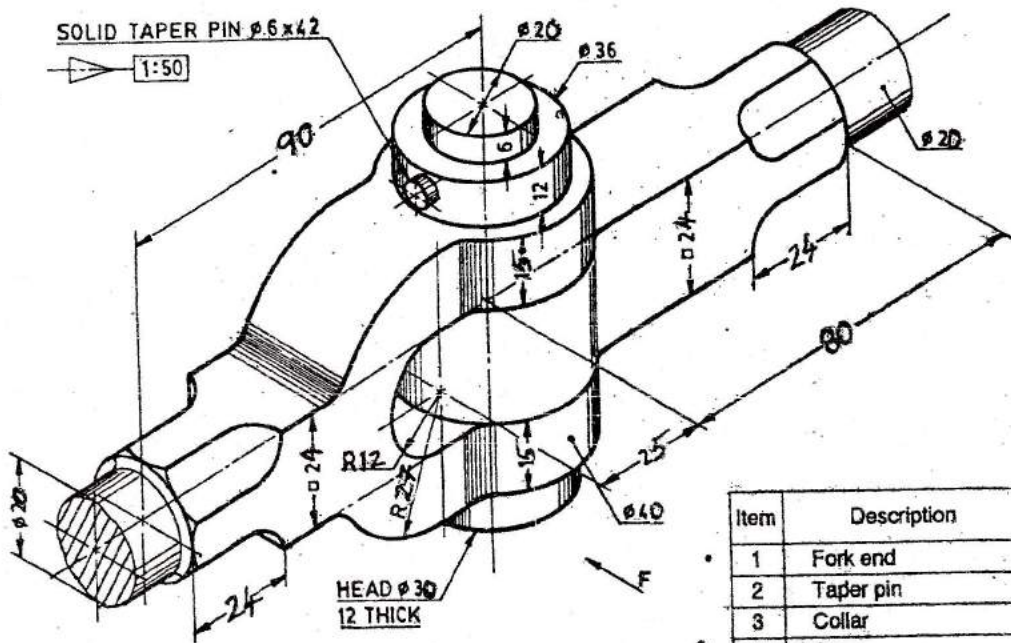
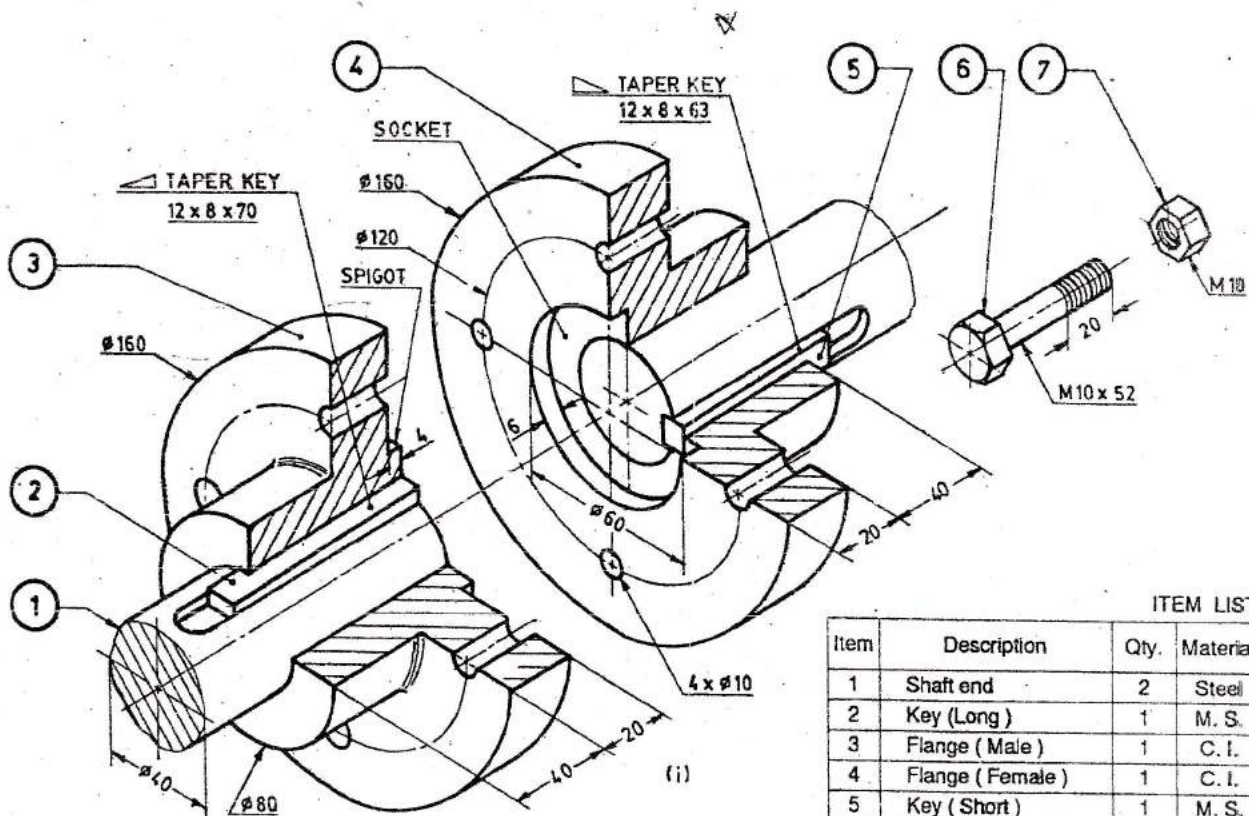


Fig 1

ITEM LIST

Item	Description	Qty.	Material
1	Fork end	1	M. S.
2	Taper pin	1	M. S.
3	Collar	1	M. S.
4	Pin	1	M. S.
5	Eye end	1	M. S.



ITEM LIST

Item	Description	Qty.	Material
1	Shaft end	2	Steel
2	Key (Long)	1	M. S.
3	Flange (Male)	1	C. I.
4	Flange (Female)	1	C. I.
5	Key (Short)	1	M. S.
6	Bolt	4	M. S.
7	Nut	4	M. S.

Fig 2

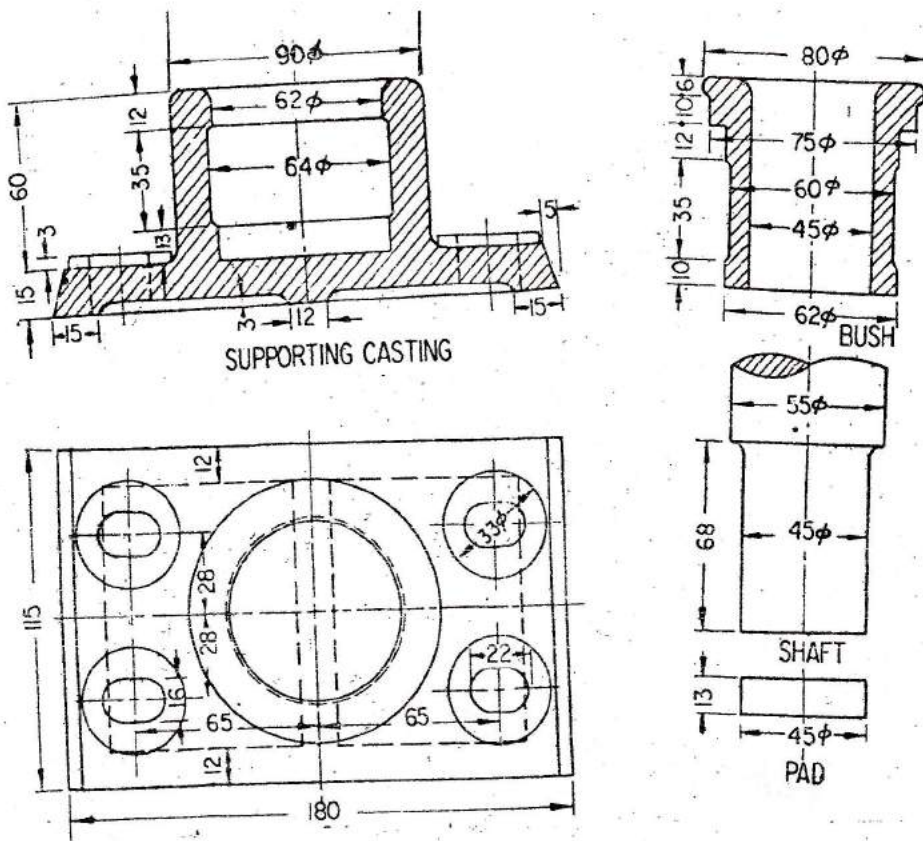
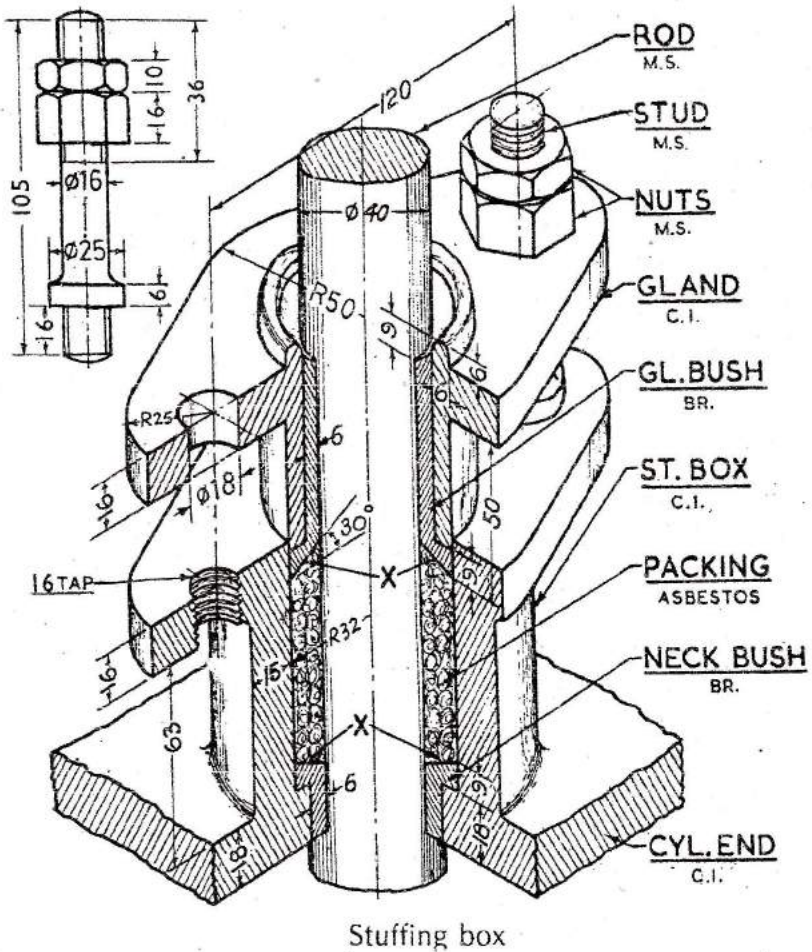


Fig 3



Stuffing box

Fig 4