

**B.Tech. Degree III Semester (Special Supplementary)  
Examination, September 2004**

**ME 303 MACHINE DRAWING  
(2002 Admissions)**

Time: 4 Hours

*ME*

Maximum Marks: 100

*(Any missing data may suitably be assumed)*

- I. (a) Draw the top and front views of a square headed bolt with hexagonal nut and a washer of size 24mm diameter and 100 mm long. (20)
- (b) Sketch the locking arrangements:  
 (i) Slotted nut with split pin  
 (ii) Castle nut with split pin (10)
- OR**
- II. Draw the views as directed below of a GIB and COTTER JOINT for rectangular rods as given in figure 1.  
 (i) Bottom half sectional elevation  
 (ii) End view looking from left. (30)
- III. Draw the left half sectional elevation and top view of a FOOT STEP BEARING shown in figure 2. (30)
- OR**
- IV. Draw the bottom half sectional elevation, plan and side view of a coupling shown in figure 3. (30)
- V. Draw the assembled drawing of Rams bottom safety valve given in figure 4, giving elevation with left half in section. (40)
- OR**
- VI. Draw the assembled view of an engine cross head with right half sectional elevation of figure 5. (40)

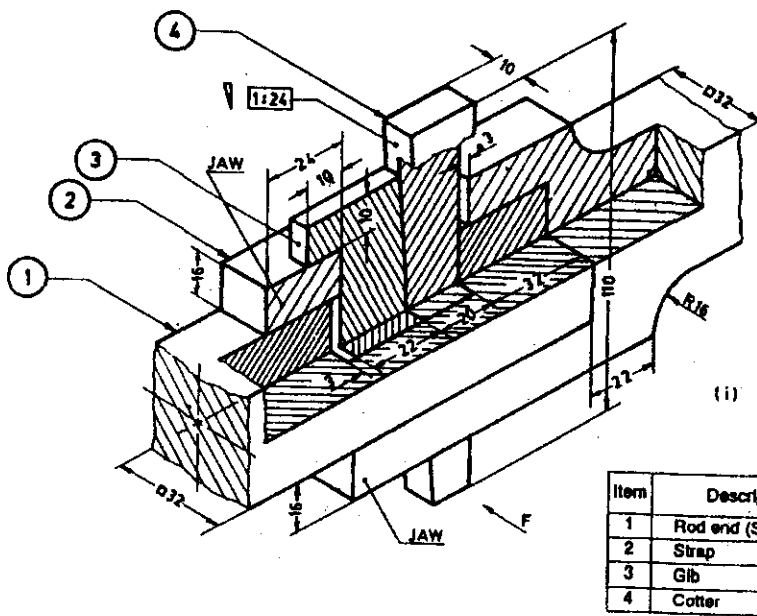


Fig. 1

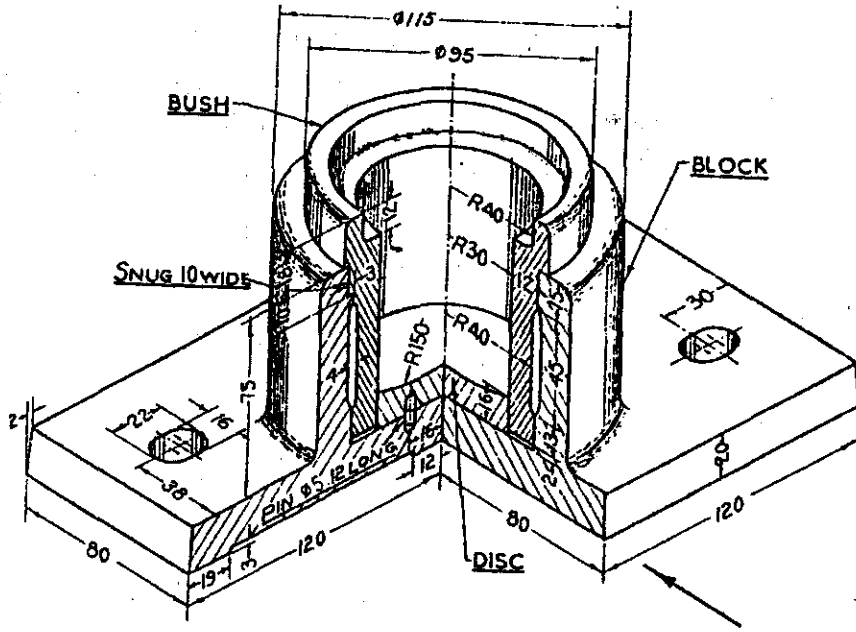


Fig. (2)

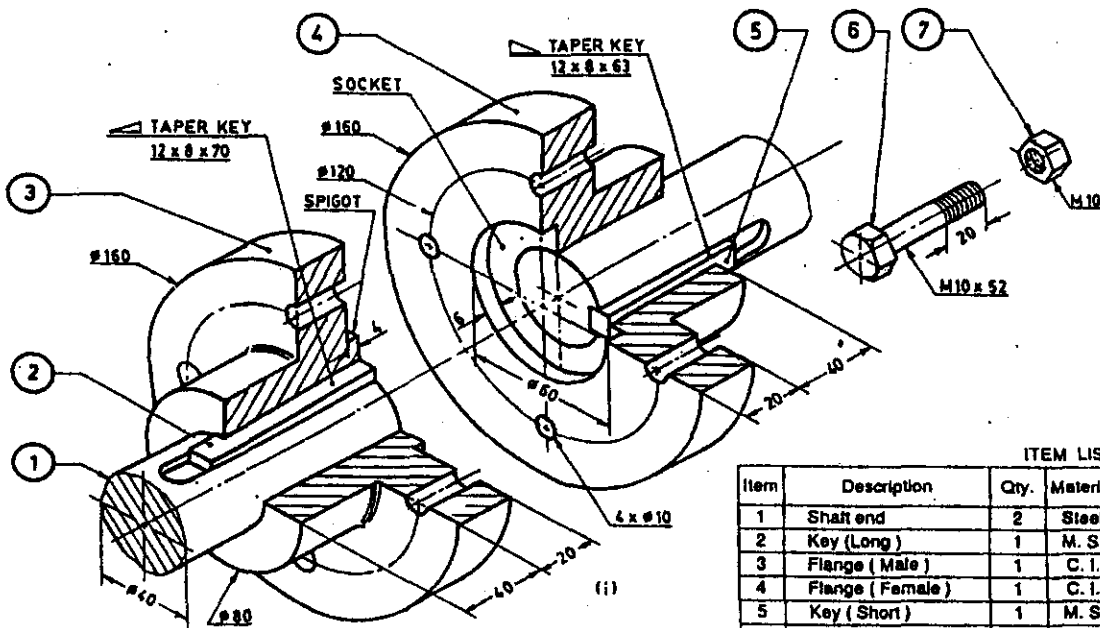


Fig. (3)

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.

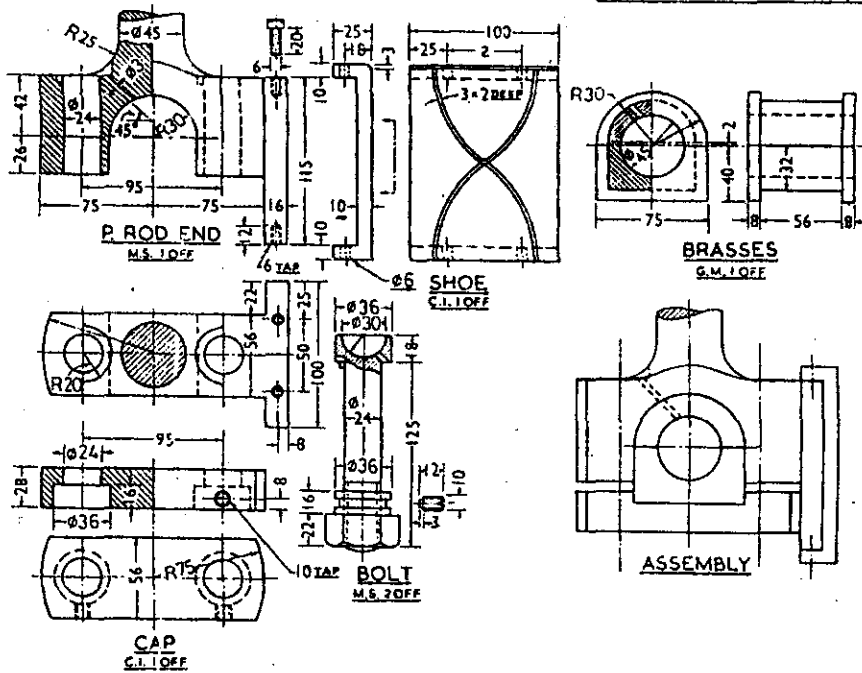


Fig. (5)

Cross-head

Contd....

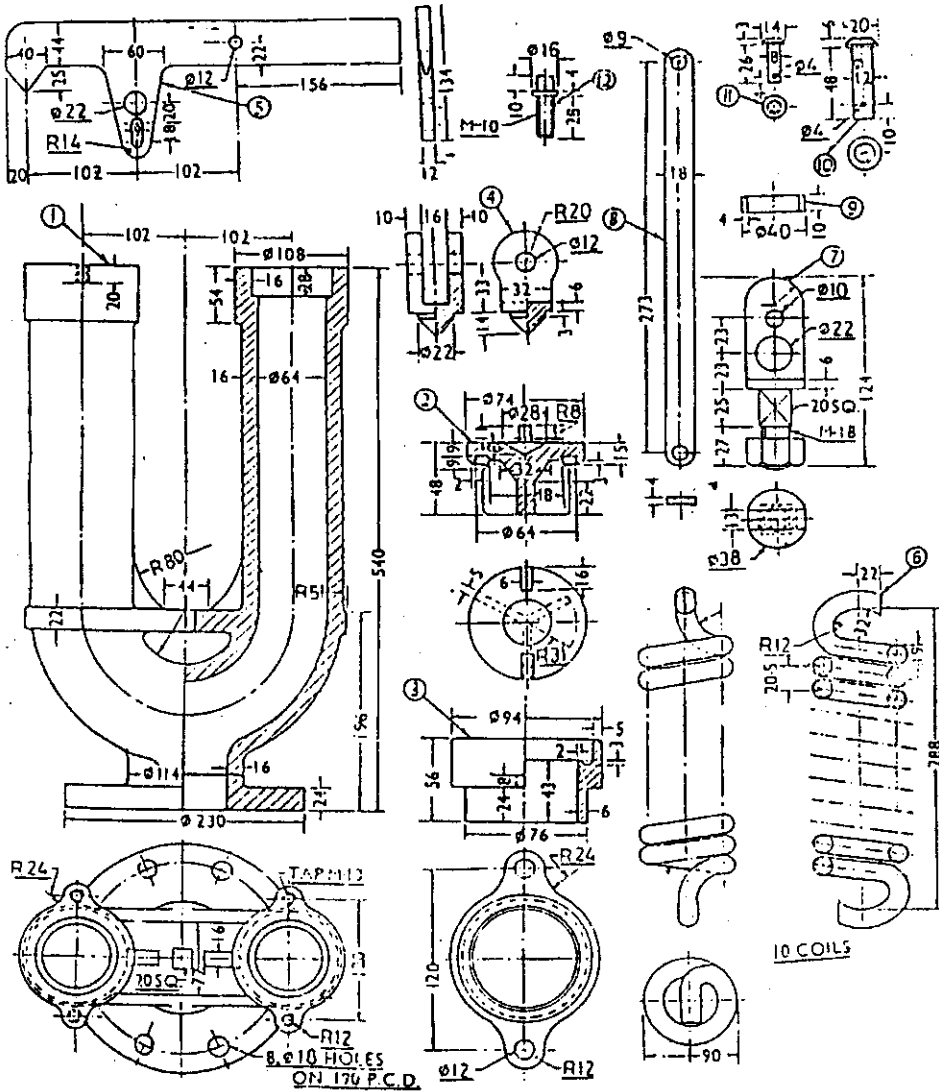


Fig. (4)

Ramsbottom safety valve (details)

13.	Split-pin (not shown)	C-30	3
12.	Cap-screw	C-30	4
11.	Pin (link)	C-30	2
10.	Pin (pivot)	C-30	1
9.	Collar	C-30	1
8.	Link	C-30	2
7.	Shackle with nut	C-30	1
6.	Spring	Spring steel	1
5.	Lever	C-30	1
4.	Pivot	C-30	1
3.	Seat	C-30	2
2.	Valve	G.M.	2
1.	Body	C.I.	1

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