D 32965 (Pages : 5) Name.....

Reg. No.....

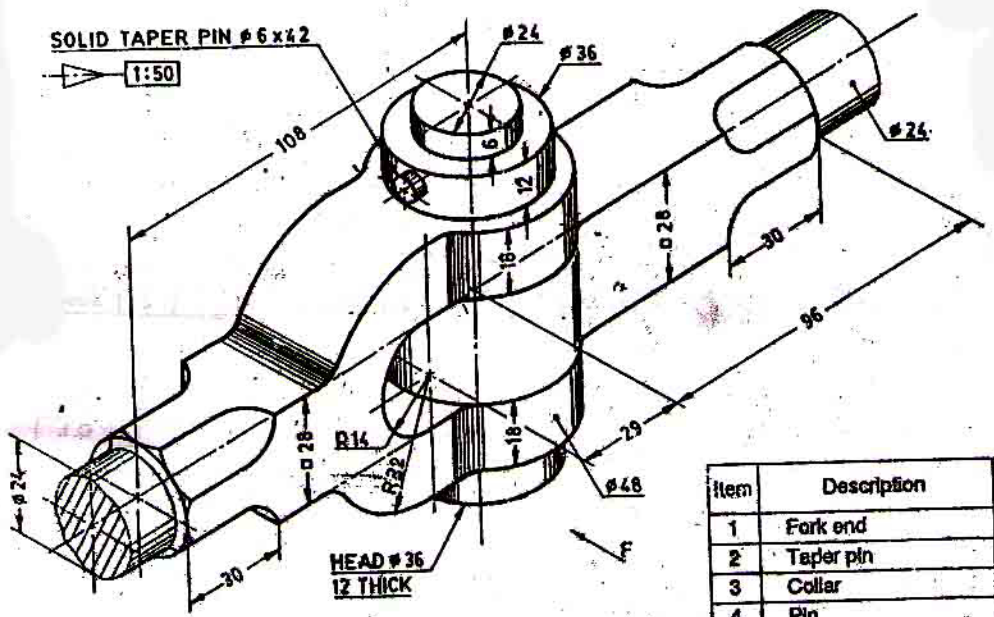
THIRD SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION DECEMBER 2012

ME/AM 04 305—MACHINE DRAWING

(2004 Admissions)

Time : Three Hours Maximum : 100 Marks

1. Fig. 1 shows an isometric view of Knuckle joint. Draw top half Sectional elevation.



ITEM LIST

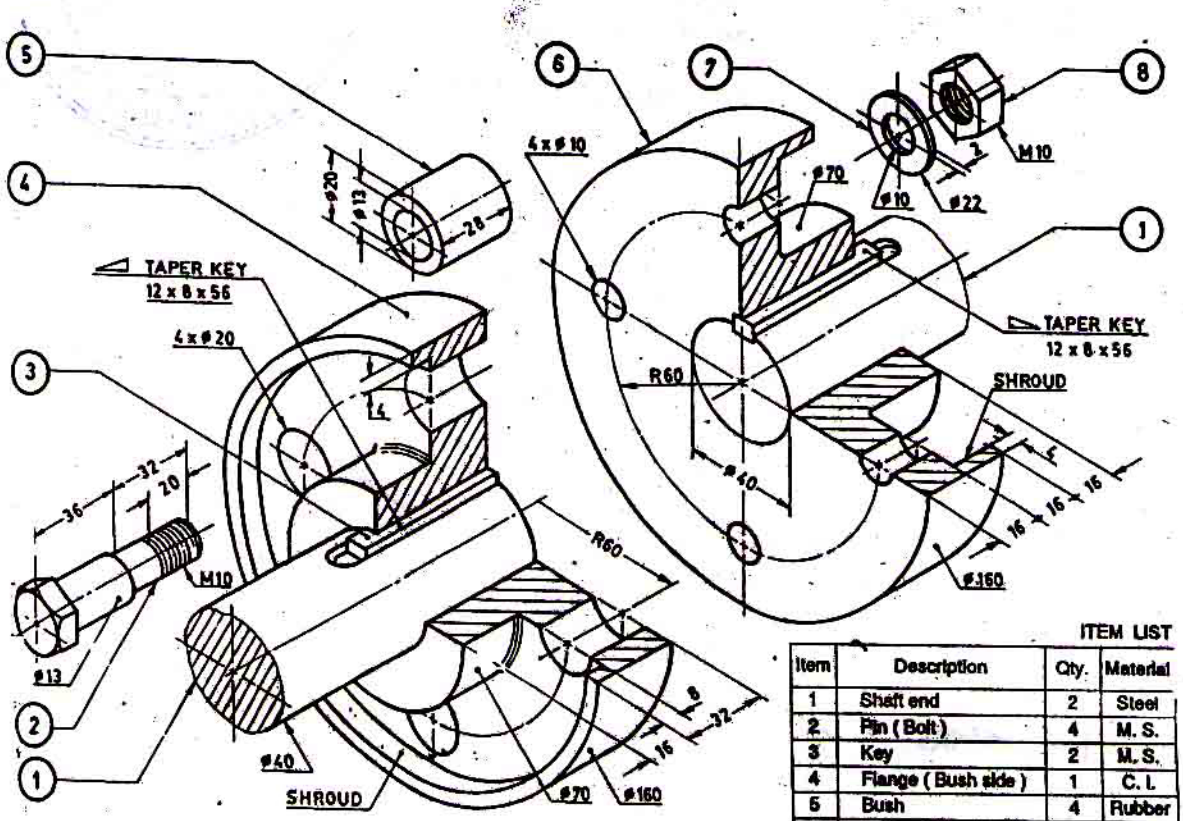
Item	Description	Qty.	Material
1	Fork end	1	M. S.
2	Taper pin	1	M. S.
3	Collar	1	M. S.
4	Pin	1	M. S.
5	Eye end	1	M. S.

Fig. 1

(20 marks)

Or

2. An isometric view of a Flexible Coupling is shown in Fig. 2. Draw the top half sectional elevation of the coupling.



ITEM LIST

Item	Description	Qty.	Material
1	Shaft end	2	Steel
2	Pin (Bolt)	4	M. S.
3	Key	2	M. S.
4	Flange (Bush side)	1	C. I.
5	Bush	4	Rubber
6	Flange (Nut side)	1	C. I.
7	Washer	4	M. S.
8	Nut	4	M. S.

Fig. 2

(20 marks)

3. Dimensions of a hole and its mating shaft are given according to shaft basis systems :

Shaft : ϕ 30 mm Hole : ϕ 30.092 mm

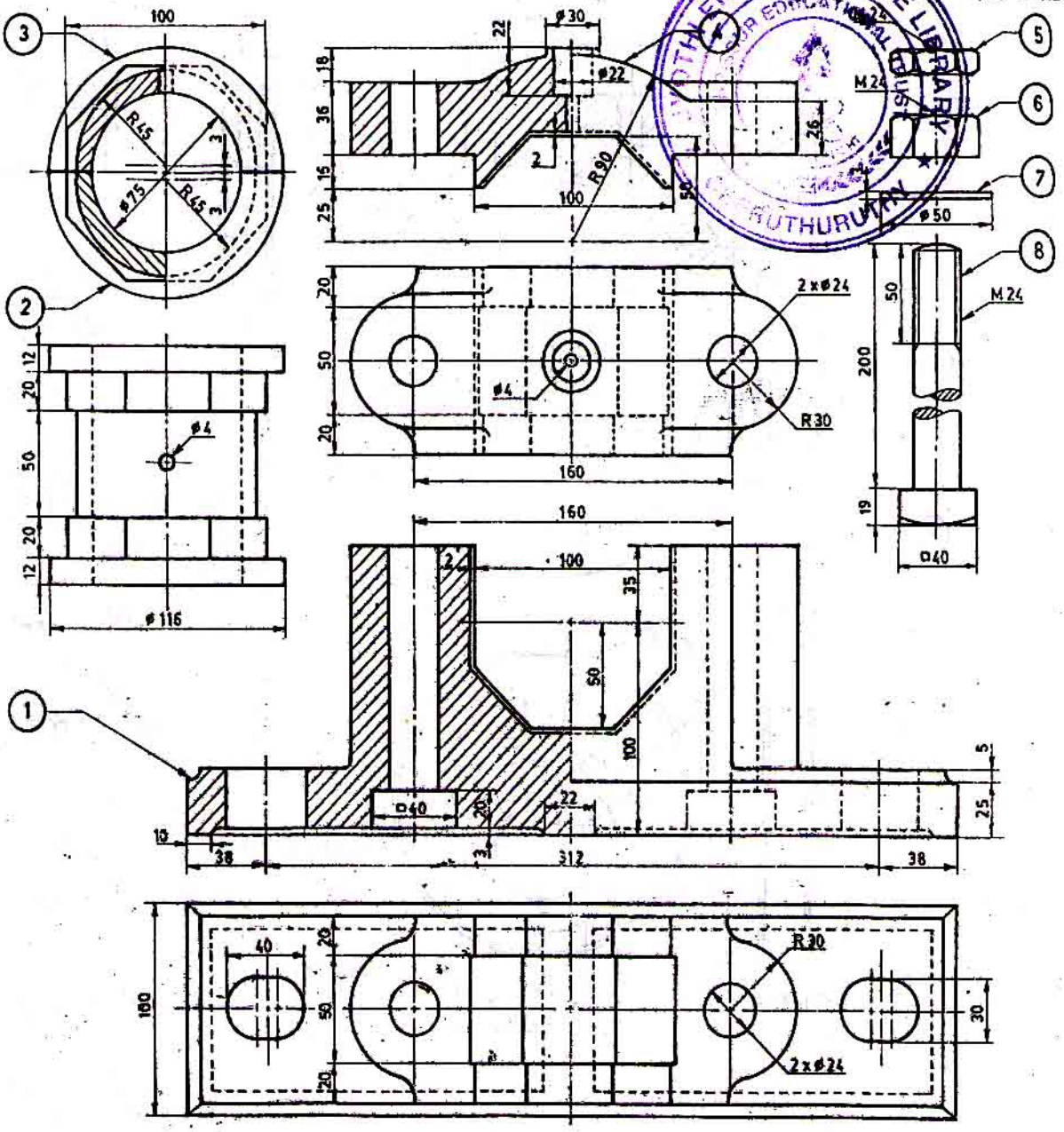
: ϕ 29.979 mm ϕ 30.040 mm.

Find the values of hole and shaft tolerances and clearances and check the calculated dimensions. Also represent the dimensions in a diagram schematically.

(30 marks)

Or

4. Fig. 3 shows details of a plummer block for a 75 mm diameter shaft. Assemble all the parts and draw the left half sectional elevation. (30 marks)



ITEM LIST

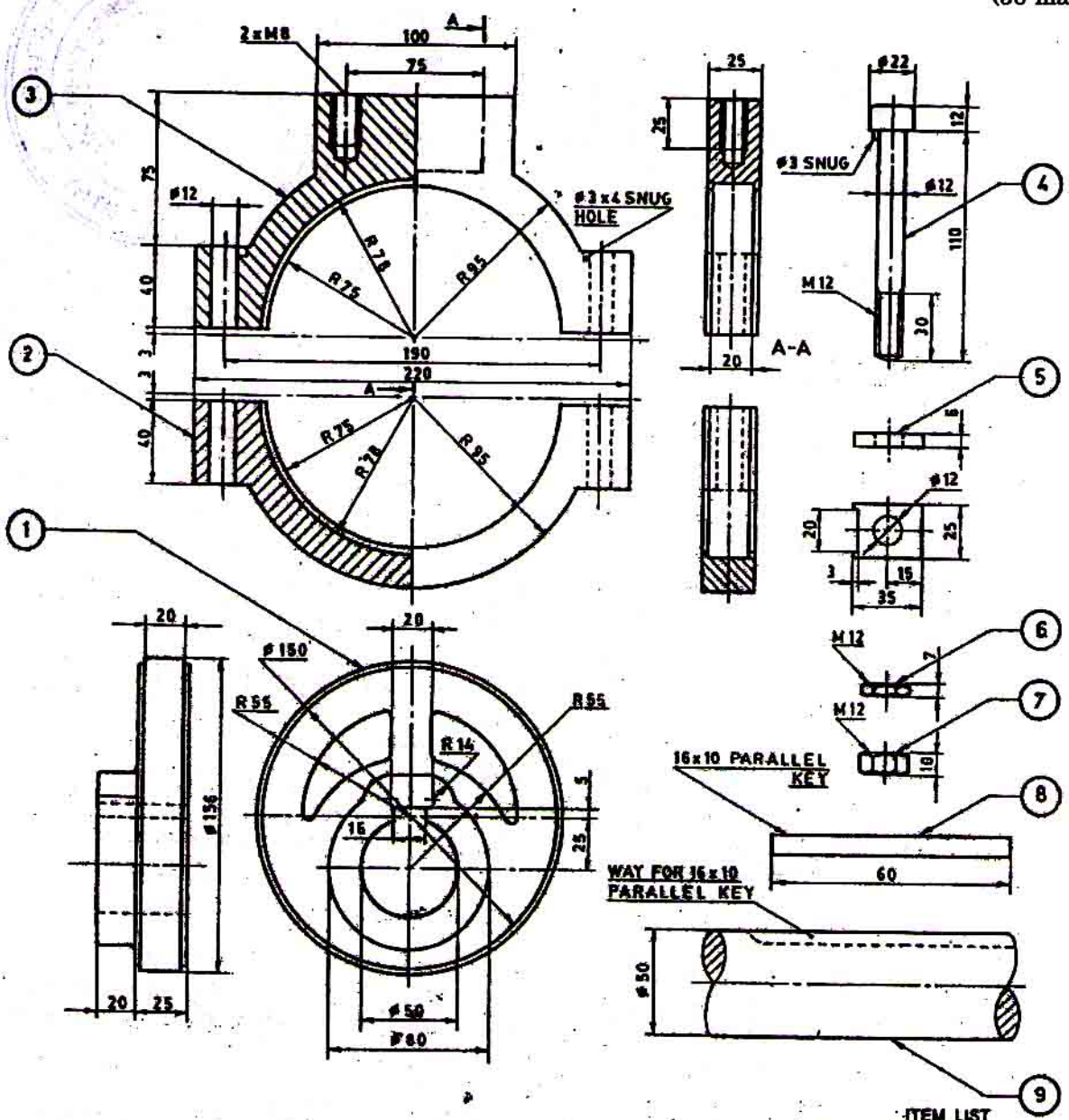
Item	Description	Qty.	Material
1	Block	1	C. I.
2	Brass (Bottom)	1	Brass
3	Brass (Top)	1	Brass
4	Cover	1	C. I.
5	Locknut	2	M. S.
6	Nut	2	M. S.
7	Washer	2	M. S.
8	Bolt	2	M. S.

Fig. 3

Turn over

5. Details of a simple eccentric is shown in Fig. 4. Draw the left half sectional elevation and a plan with all parts assembled together.

(50 marks)



ITEM LIST

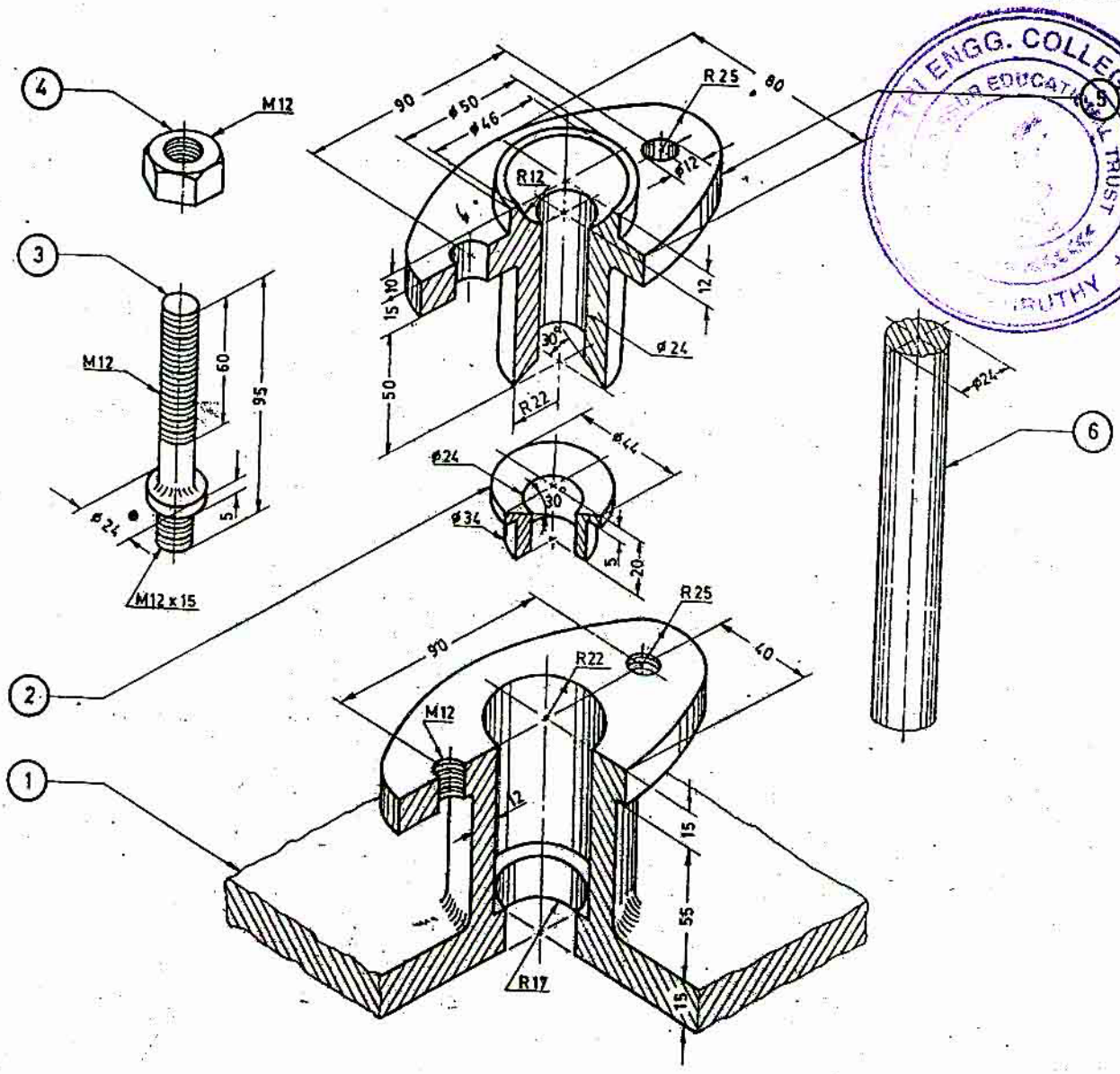
Item	Description	Qty.	Material
1	Sheeve	1	C. S.
2	Strap half (Bottom)	1	C. I.
3	Strap half (Top)	1	C. I.
4	Bolt	2	M. S.
5	Shim	2	Brass
6	Lock nut	2	M. S.
7	Nut	2	M. S.
8	Key	1	M. S.
9	Shaft	1	Steel

Fig. 4

Or

6. Disassembled isometric view of a stuffing box is shown in Fig. 5. Assemble the parts and draw a left half sectional elevation and a plan of the stuffing box.

(50 marks)



ITEM LIST

Item	Description	Qty.	Material
1	Body	1	C. I.
2	Gland bush	1	Brass
3	Stud	2	M.S.
4	Nut	2	M. S.
5	Gland	1	C. I.
6	Piston rod	1	Steel

Fig. 5