D 90010–A

(Pages : 6)

Name.....

Reg. No.....

THIRD SEMESTER B.TECH. (ENGINEERING) [14 SCHEME] DEGREE EXAMINATION, NOVEMBER 2015

ME 14 307 (P/D)—COMPUTER ASSISTED MACHINE DRAWING

Time : Three Hours

Maximum : 100 Marks

1. Figure 1 shows the components of Socket and Spigot joint. Assemble the parts and draw the front view in section and the side view.

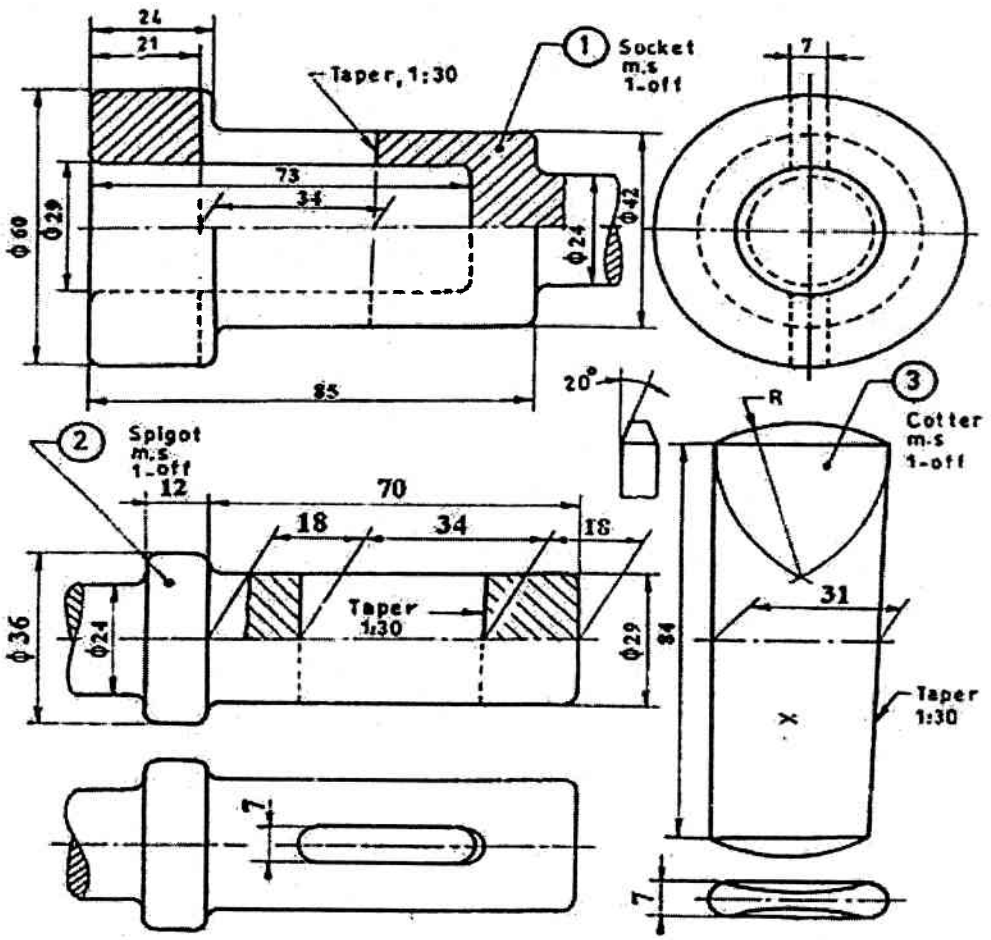


Fig. 1 Socket and Spigot Joint

(25 marks)

Or

Turn over

2. Figure 2 shows the components of Universal coupling. Assemble the parts and draw the front view in section and the top view.

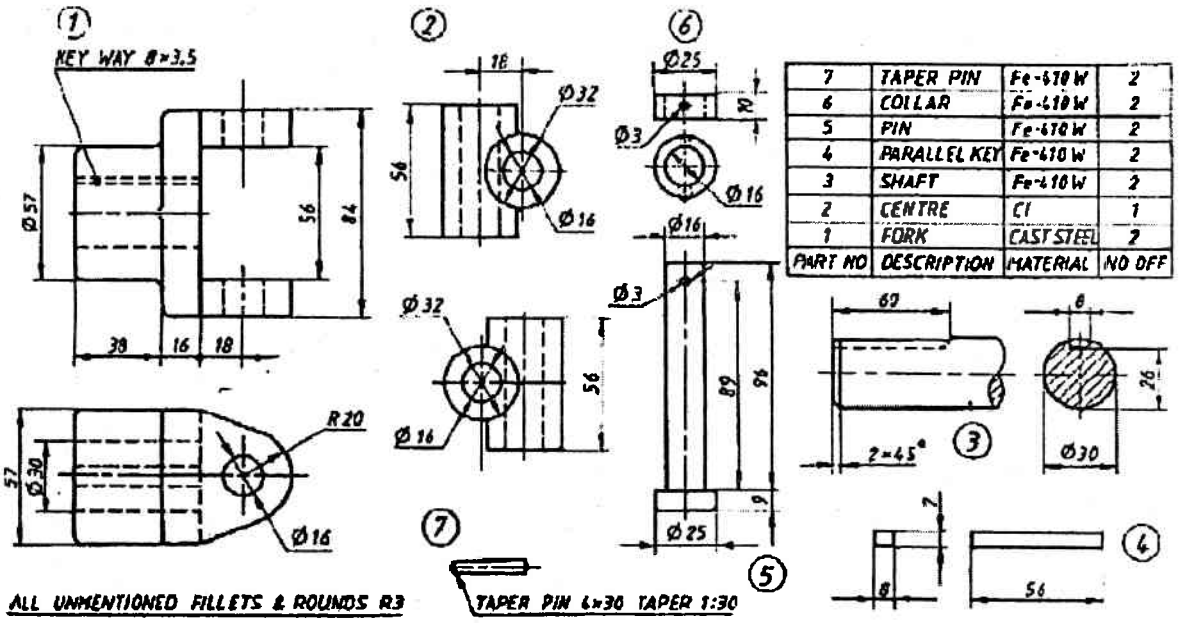


Fig. 2 Universal coupling

(25 marks)

3. A journal bearing consists of a bronze bush of diameter 100 mm fitted into a housing and a steel shaft of 50 mm diameter, running in the bush, with oil as lubricant. Determine the working dimensions of (a) bore of the housing, (b) bush and (c) shaft. Calculate the maximum and minimum interference or clearance.

(30 marks)

Or

4. Figure 3 shows the isometric view of a foot step bearing. Draw the sectional front view and side view of the assembly.

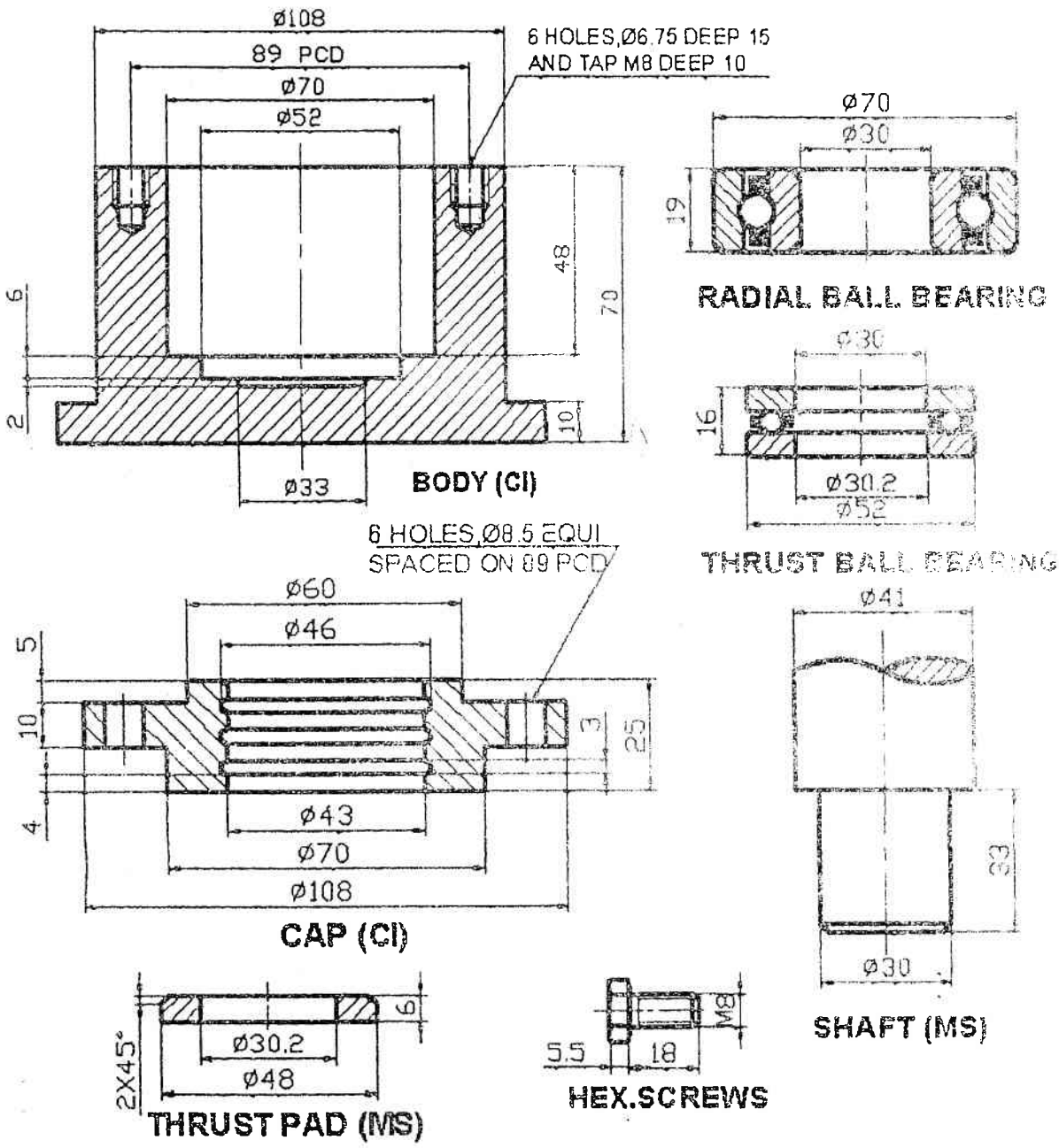


Fig. 3 Foot Step Bearing

(30 marks)

Turn over

5. The part drawings of stuffing box is shown in Fig. 4 Draw the sectional front view and top view of the assembly.

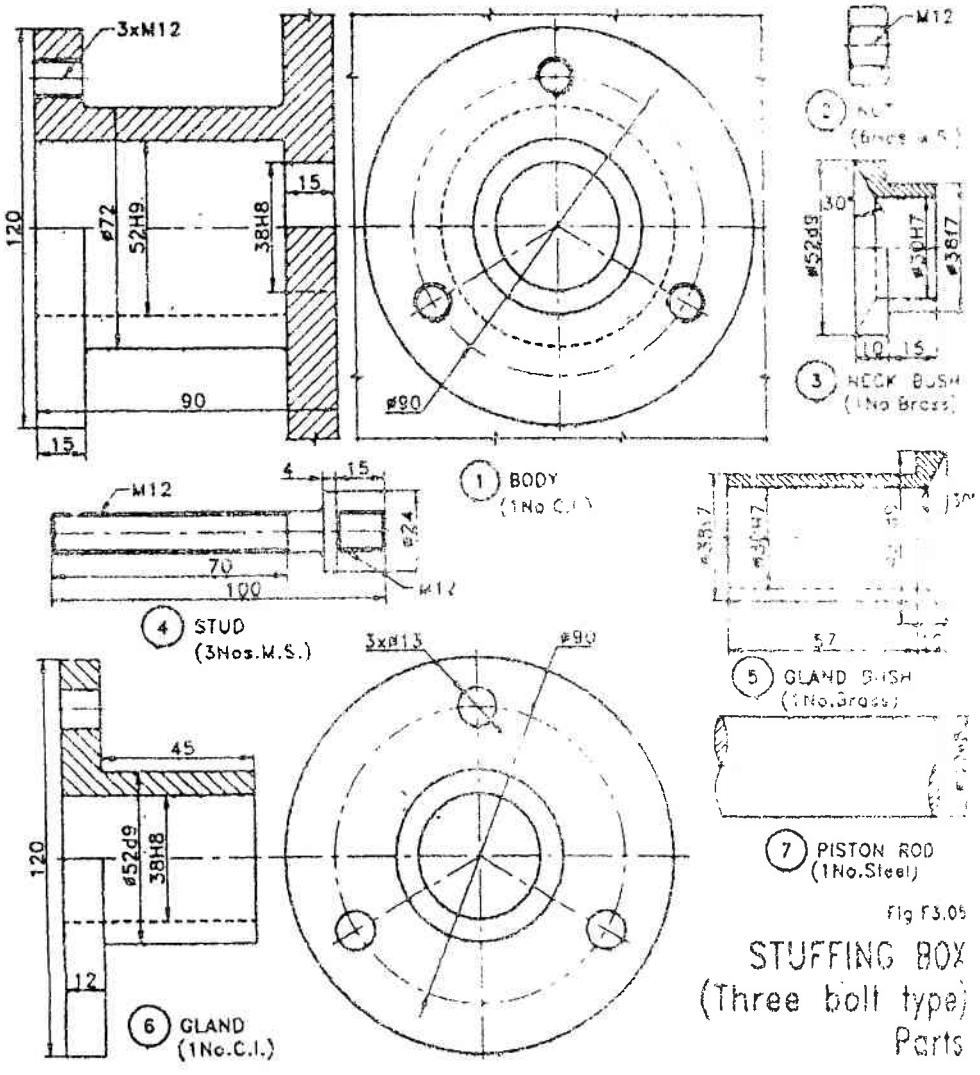


Fig. 4 Stuffing box

6. Draw the sectional front view and top view of the assembled steam stop valve shown in Fig. 5 (a) and (b)

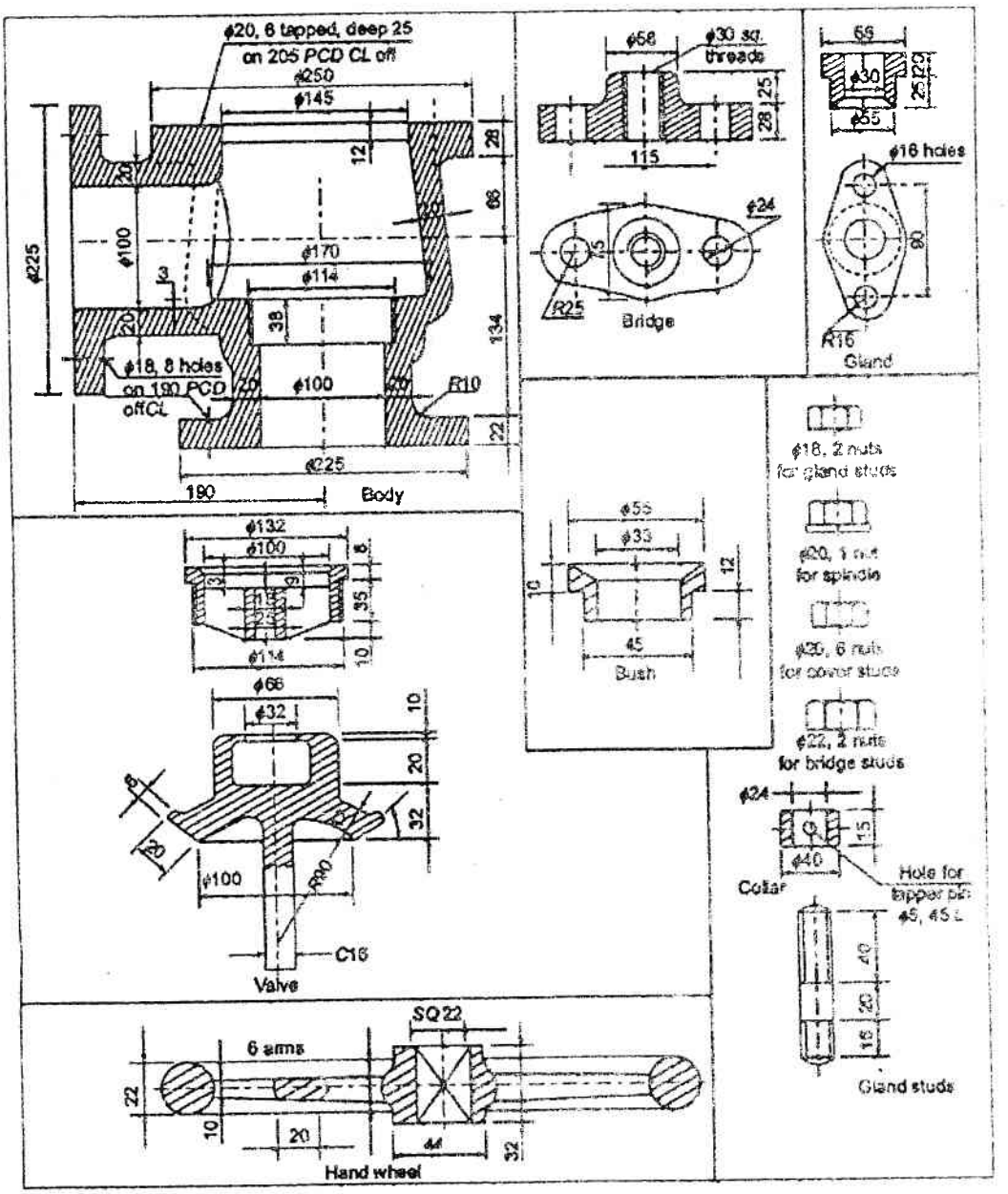
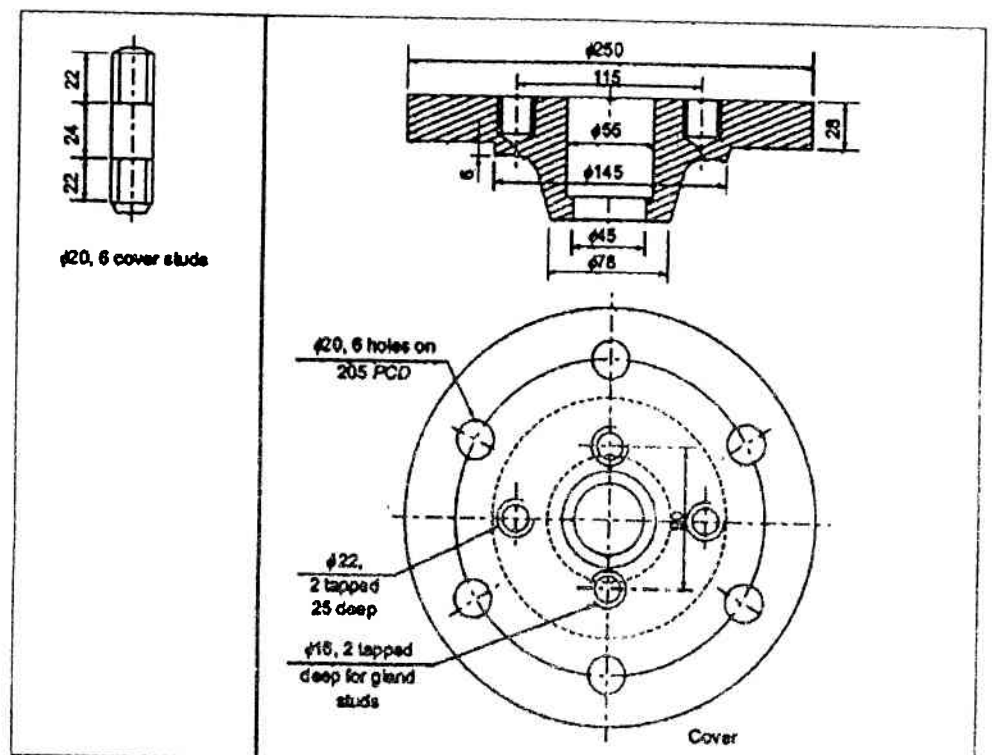


Fig. 5 (a) Steam stop valve



Sl. No.	*Part*	*Quantity*	*Material*
1	Valve body	1	CI
2	Cover	1	CI
3	Bridge	1	CI
4	Valve	1	Brass
5	Bush (ϕ 45 × 22 mm)	1	Brass
6	Bush (ϕ 55 × 45 mm)	1	Brass
7	Spindle	1	GM
8	Bridge studs with nuts	2 sets	MS
9	Cover studs with nut	6 sets	MS
10	Spindle stud with nut	1 set	MS
11	Gland studs with nuts	2 sets	MS
12	Hand wheel	1	CI

Fig. (b) Steam stop valve

(45 marks)