

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/
COMMERCIAL PRACTICE, NOVEMBER - 2023**

MACHINE DRAWING

[Maximum marks: 100]

[Time: 3 Hours]

[Note:- 1. All dimensions are in mm.

2. First angle projections 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 accompanied.]

UNIT – I

I. Draw the profile of the following thread forms of pitch $P = 24$ mm and mark dimensions in terms of P .

- (a) British Association (BA) thread. (b) ISO Metric thread. **(15)**

OR

II. Draw single riveted single strap butt joint of 10 mm thick plates using snap headed rivets. Show at least 2 rivets in the plan view and add a sectional elevation. Mark the dimensions in terms of rivet diameter d .

(15)

UNIT – II

III. An isometric view of knuckle joint is shown in Fig. I. Draw top half sectional front view and end view.

(30)

OR

IV. An isometric view of a flanged coupling unprotected type shown in Fig. II. Draw the top half sectional elevation and end view from left side.

(30)

UNIT - III

V. Detailed views of a Foot step bearing is shown in Fig. III. Assemble the parts and draw right half sectional elevation and top view.

(40)

OR

VI. Detailed view of a stuffing box shown in Fig. IV. Assemble the parts and draw left half sectional front view and bill of material.

(40)

UNIT – IV

VII. Draw the welding symbols of the following.

- (a) Spot weld
- (b) Plug weld
- (c) Seam weld
- (d) Square butt weld
- (e) Fillet weld

(15)

OR

VIII. Draw the single line orthographic symbols of the following.

- (a) Cross valve
- (b) Angle valve
- (c) Check valve
- (d) Gate valve
- (e) Globe valve

(15)

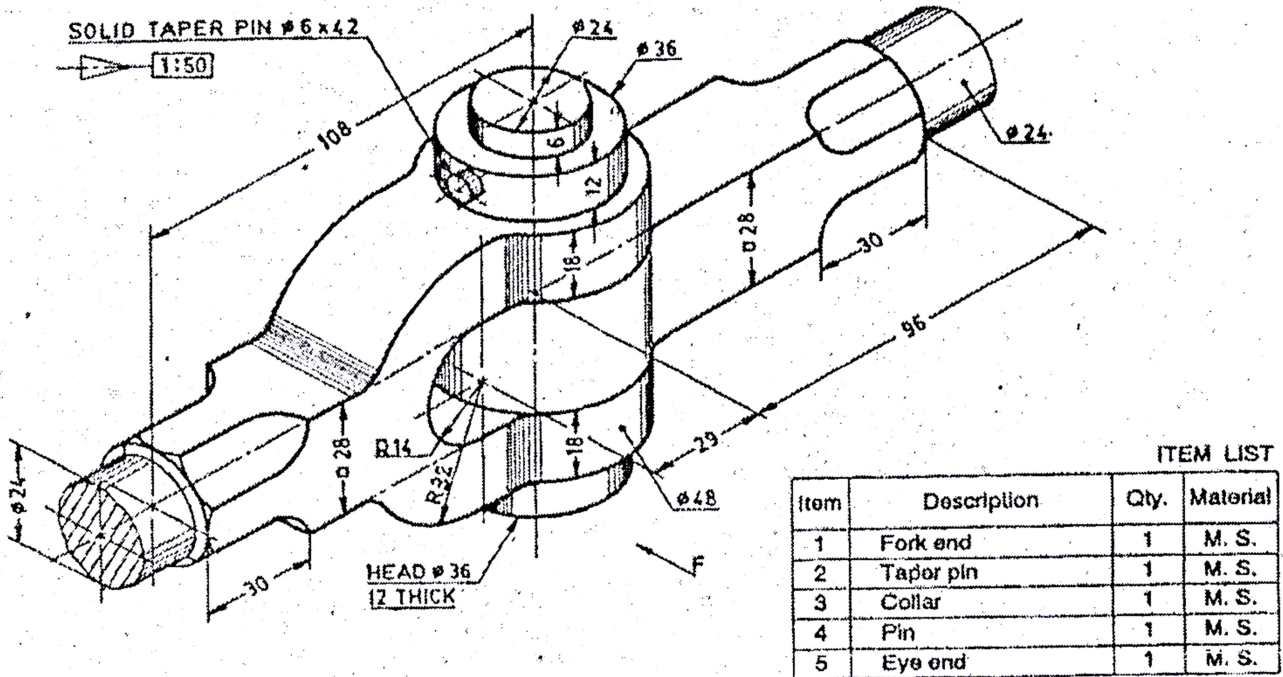
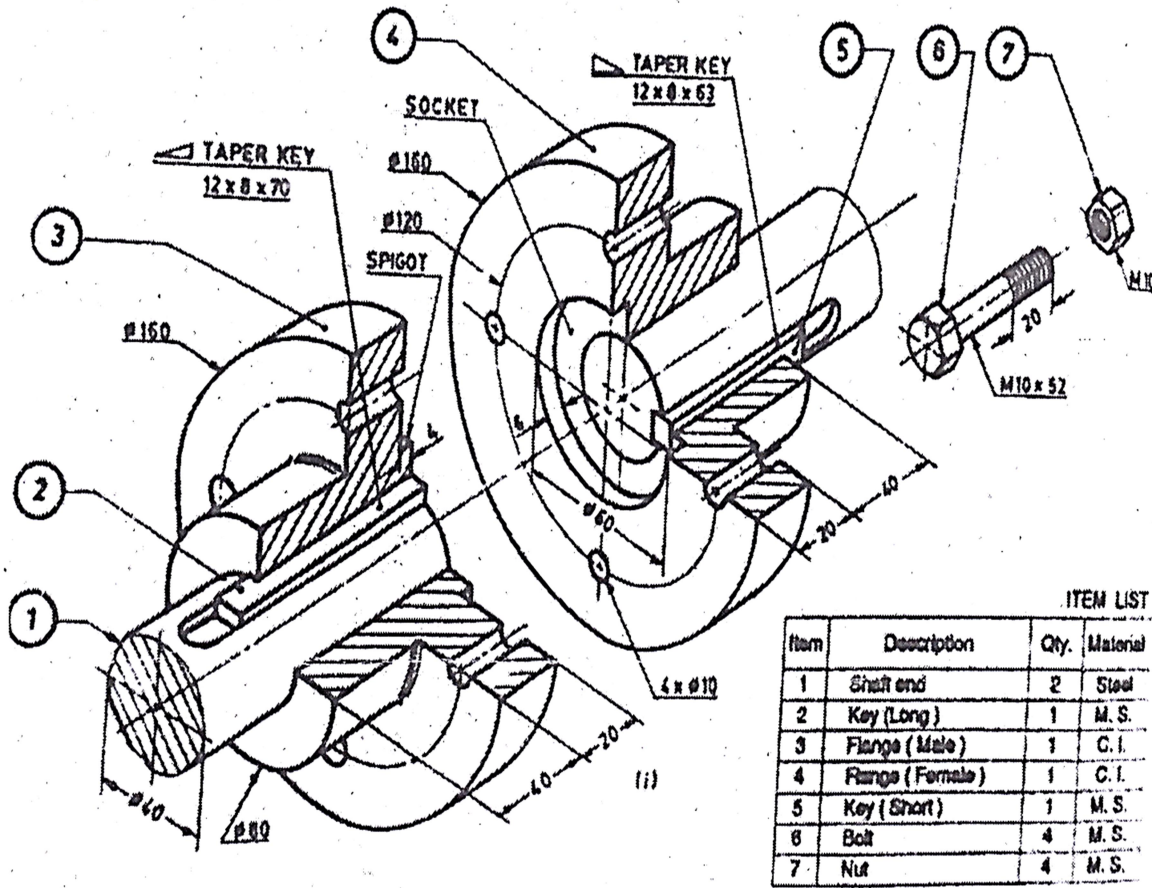


Fig.1-Knuckle Joint



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. II Flanged coupling (un protected type)

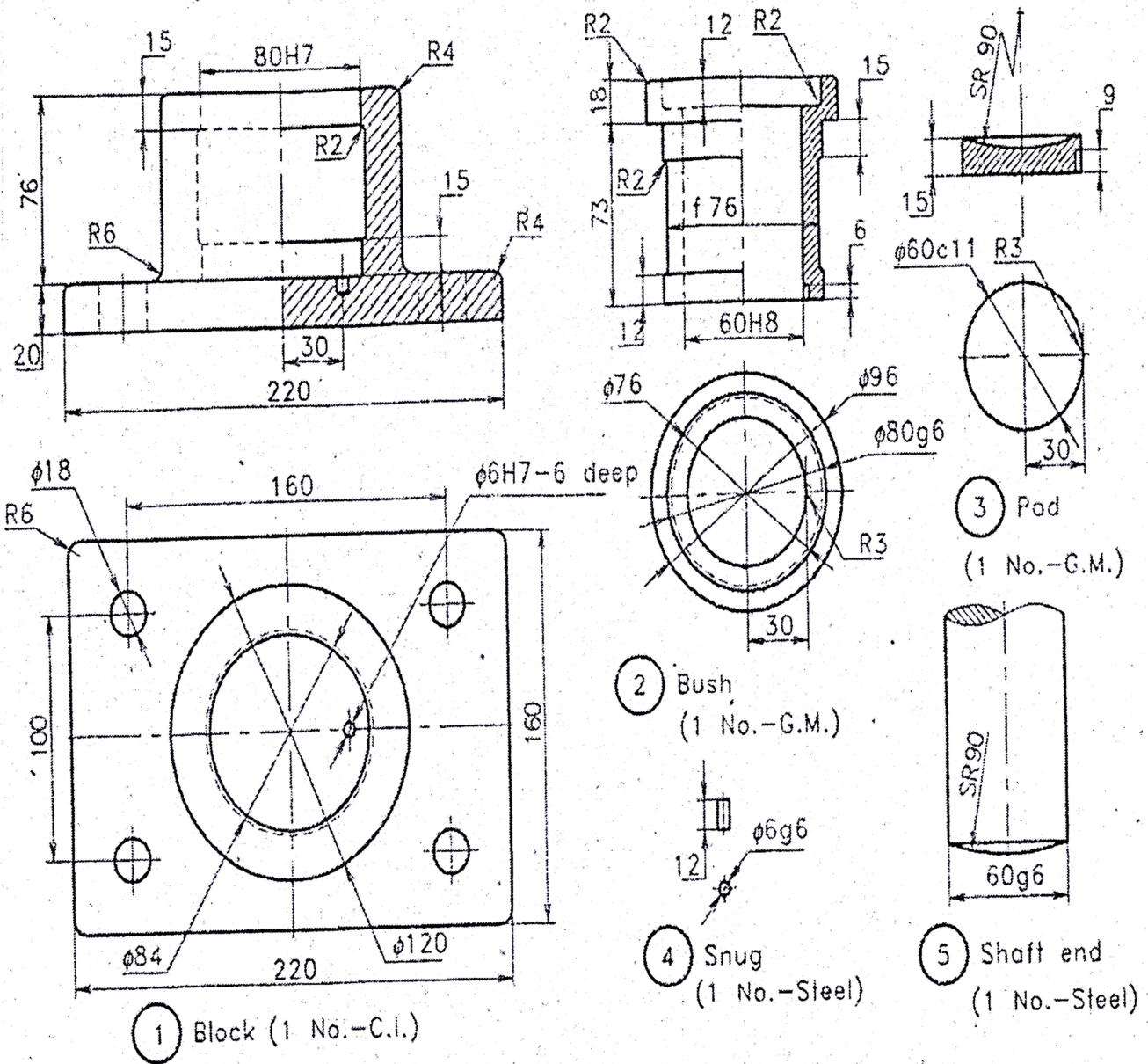


Fig.3 Foot step Bearing

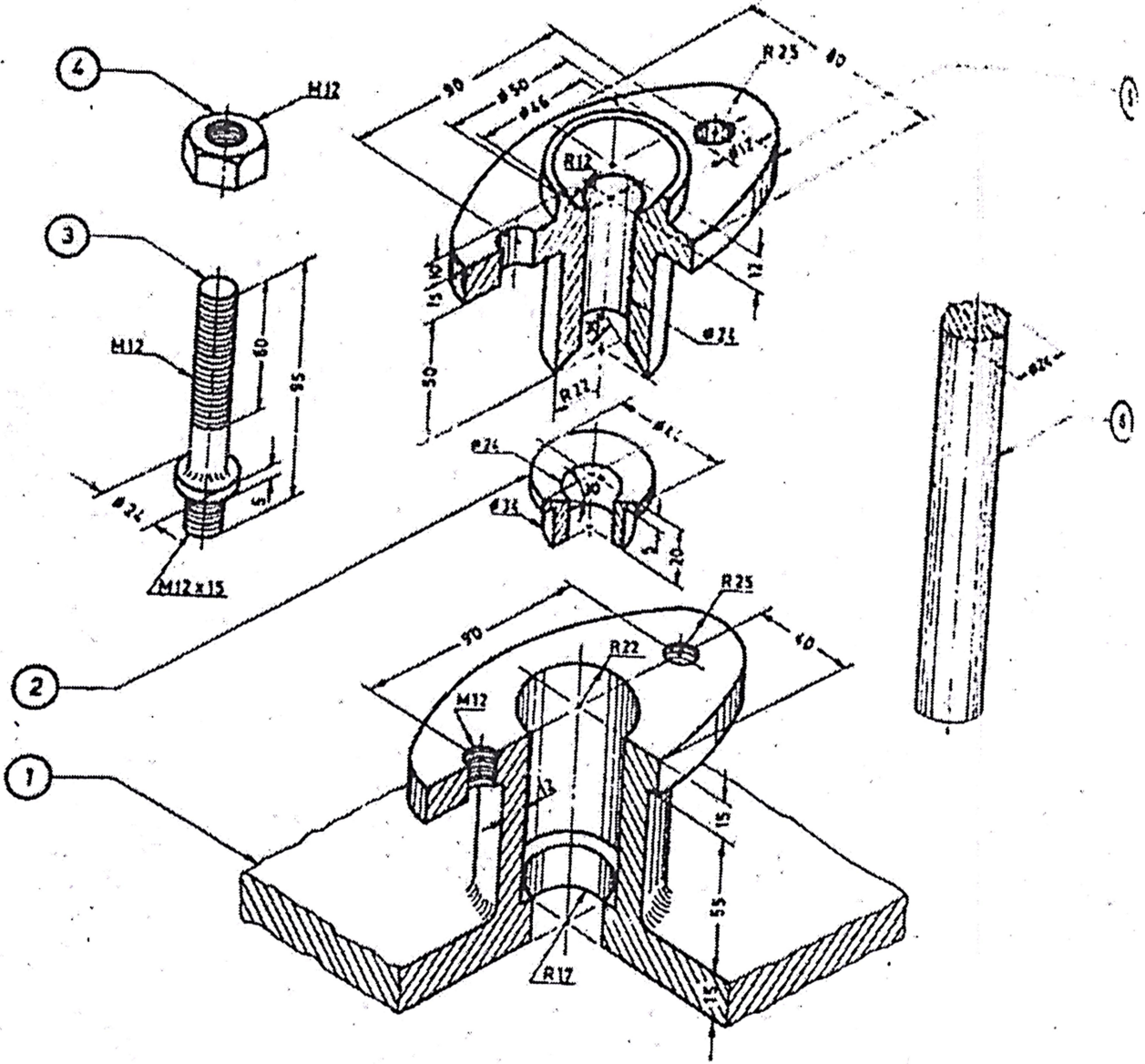


Fig.IV Details of stuffing box

1. BODY
2. GLAND BUSH
3. STUD
4. NUT
5. GLAND
6. PISTON ROD