

THIRD SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/
TECHNOLOGY—MARCH, 2014

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 to be followed.
3. Missing datas 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 the following two views of a bolt and a nut with washers. Take diameter of the bolt as 10 mm :

- | | |
|-------------------------|----|
| (a) Elevation | 10 |
| (b) Left hand side view | 5 |

OR

II Draw two views of a single riveted lap joint for 16 mm thick plate. Show at least three rivets in plan and indicate all dimension in terms of diameter of the rivet. Use snap head rivets :

- | | |
|---------------|----|
| (a) Plan | 10 |
| (b) Elevation | 5 |

UNIT—II

III Isometric view of a socket and spigot joint is shown in figure 1. Draw the following views :

- | | |
|----------------------------------|----|
| (a) Top half sectional elevation | 20 |
| (b) Side view from left. | 10 |

OR

IV Exploded isometric view of a protected type flanged coupling is shown in figure 2. Arrange the coupling and draw the following views :

- | | |
|----------------------------------|----|
| (a) Top half sectional Elevation | 20 |
| (b) Left hand side view | 10 |

UNIT—III

- V Exploded view of a plumber block is shown in figure 3. Assemble the parts and draw the following views :
- (a) Left half sectional elevation 25
 - (b) Side view from right 15

OR

- VI Exploded view of an IC Engine connecting rod (Type-1) is shown in figure 4. Assemble the parts and draw the following views :
- (a) Bottom half sectional elevation 25
 - (b) Side view from left 15

UNIT—IV

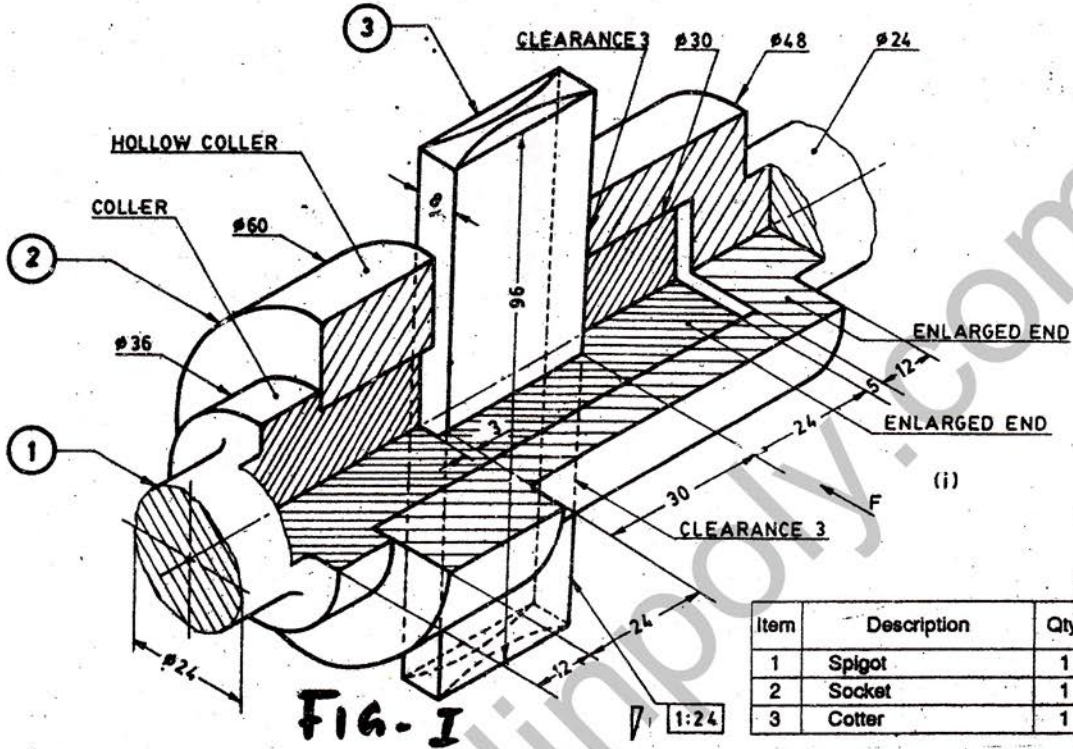
- VII Draw schematically the representations of the following types of welds :
- (a) Butt weld
 - (b) Fillet weld
 - (c) Slot weld
 - (d) Plug weld
 - (e) Seam weld (5×3=15)

OR

- VIII Give the double line orthographic symbols of the following screwed pipe fittings :
- (a) 90° Elbow
 - (b) 45° Elbow
 - (c) Tee
 - (d) Reducer Tee
 - (e) Cross. (5×3=15)
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socket and spigot joint

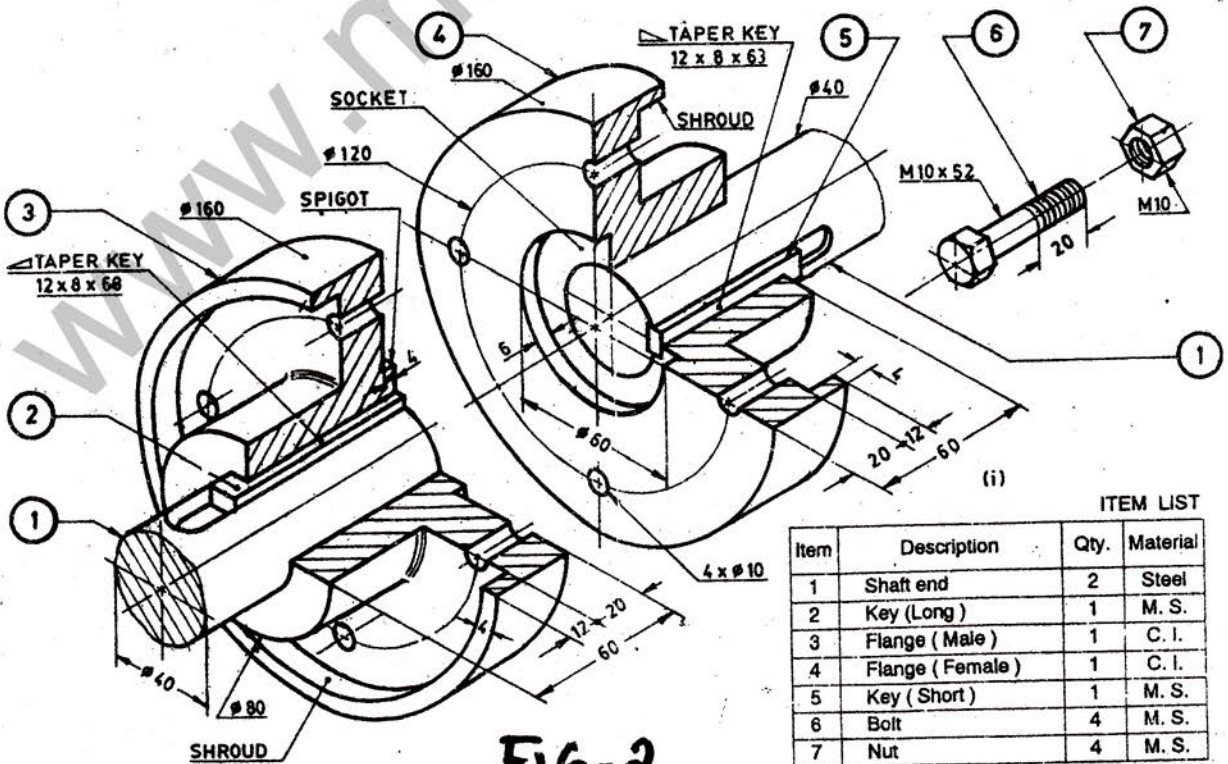


ITEM LIST

Item	Description	Qty.	Material
1	Spigot	1	M. S.
2	Socket	1	M. S.
3	Collar	1	M. S.

FIG-1

Flanged coupling (Protected Type)



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-II

(P.T.O)

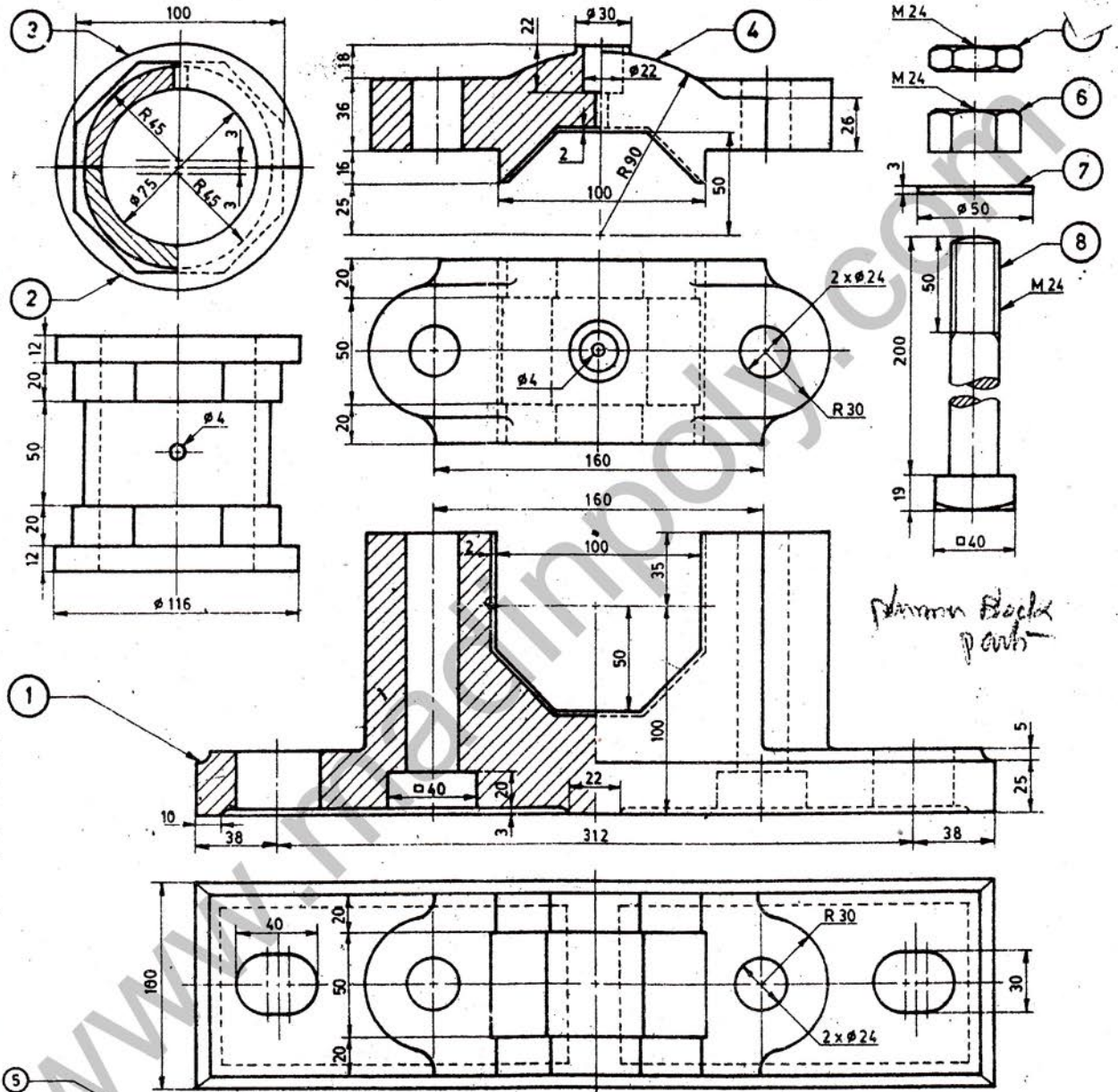


FIG-3
PLUMMER BLOCK.
(PARTS)

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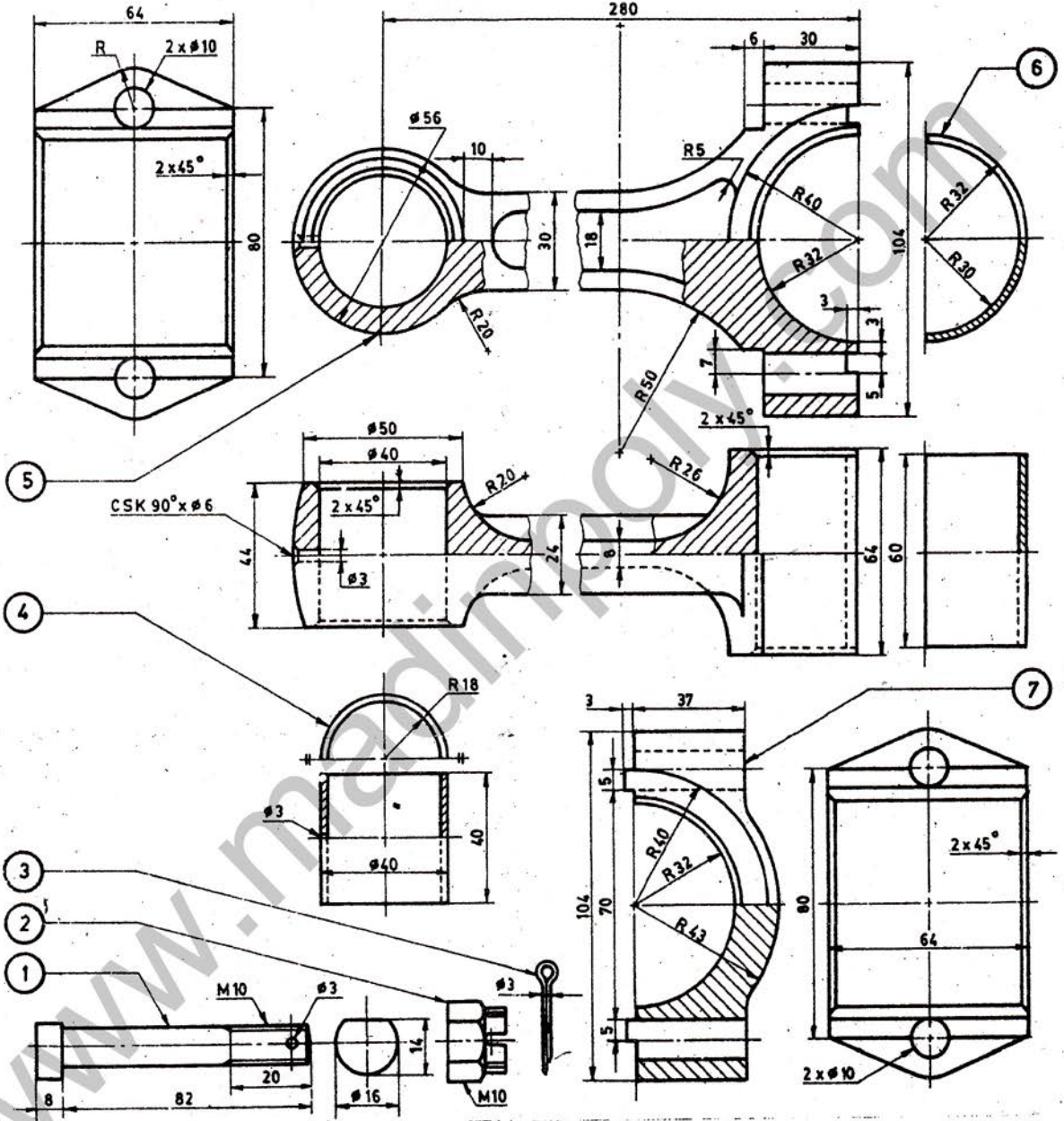


FIG-4-
I. C. ENGINE CONNECTING ROD
(PARTS)