

Subject Code: R13209/R13

Set No - 1

I B. Tech II Semester Regular/Supplementary Examinations May/June - 2016
ENGINEERING DRAWING

(ME)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

- (a) A pentagonal plate of 45mm side has a circular hole of 40mm diameter in its centre. The plane stands on one of its sides on the HP. With its plane perpendicular to VP and 45° inclined to the HP. Draw the projections.
(b) Draw the isometric view: (Figure 1)

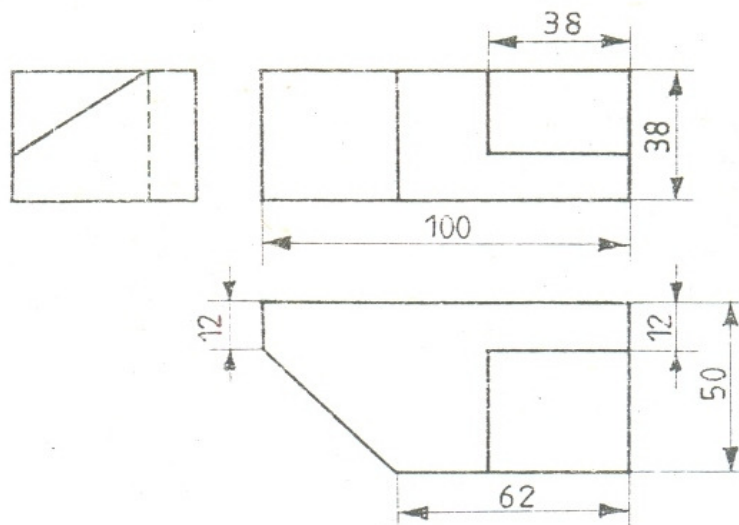


Figure 1

[12+10]

PART-B

- (a) Construct a vernier scale of $RF=1/80$ to read inches and to measure up to 15 yards.
(b) The foci of an ellipse are 90mm apart and the minor axis is 72mm long. Determine the length of the major axis. Construct the ellipse. Draw a tangent to the ellipse from any point outside the ellipse.
- (a) Two pegs fixed on a wall are 4.5m apart. The distance between the pegs measured parallel to the floor is 3.6m. If one peg is 1.5m above the floor, find the height of the second peg and the inclination of the line joining the two pegs, with the floor.
(b) A line GH 45mm long is in HP and inclined to VP. The end G is 15mm in front of VP. Length of front view is 35mm. Draw the projections of the line. Determine its inclination with VP.

[8+8]

[8+8]



4. A line AB 65mm long has its end A in VP and end B in HP. The line is inclined to HP by 60° and to VP by 30° . Draw the projections of the line. Locate its traces. [16]
5. A composite plate of negligible thickness is made up of a rectangle 60mm x 40mm, and a semi-circle on its longer side. Draw its projections when the longer side is parallel to the HP and inclined at 45° to the VP, the surface of the plate making 30° angle with the HP. [16]
6. Draw the projections of a cone, base 75mm diameter and axis 100mm long, lying on the HP on one of its generators with the axis parallel to the VP. [16]
7. Draw (a) Front View (b) Top View (c) Side View : (Figure 2) [16]

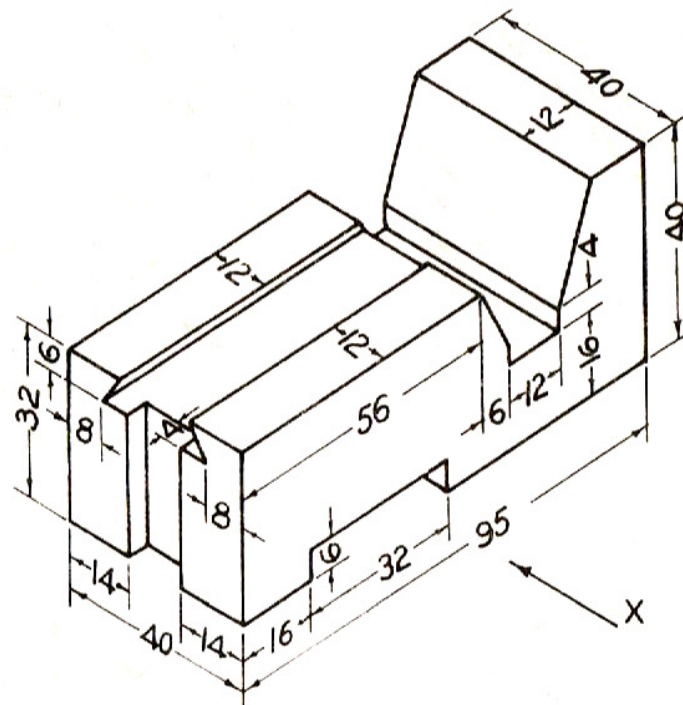


Figure 2

[16]



Subject Code: R13209/R13

Set No - 2

I B. Tech II Semester Regular/Supplementary Examinations May/June - 2016
ENGINEERING DRAWING

(ME)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

1. (a) A 60° set square of 125mm longest side is so kept that the longest side is in the HP making an angle of 30° with the VP and the set square itself inclined at 45° to the HP. Draw the projections of the set square.
(b) Draw the isometric view: (Figure 1)

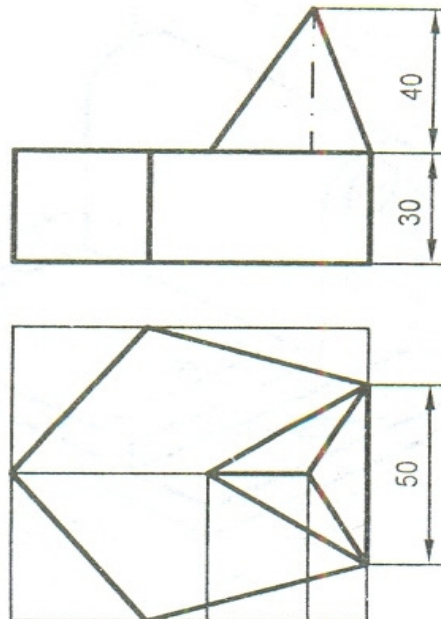


Figure 1

[12+10]

PART-B

2. (a) Draw a scale of full size, showing 1/100 inch and measure up to 5 inches.
(b) The length of a horizontal line AB is 100 mm point C is at a distance of 75 mm from A and 80 mm from B. Draw an ellipse passing through the three points ABC. Draw a tangent to the ellipse from any point outside the ellipse.

[8+8]



- 3. (a) A point A is 35mm above HP and 20mm in front of VP. Draw the front, top and right side view.
(b) A line AB 60mm long is parallel to HP. The point A is 20mm above HP and 35mm in front of VP. The length of the front view is 50mm. Determine its true inclination with VP. [8+8]
- 4. A room is 4.8m x 4.2m x 3.6m high. Determine graphically the distance between a top corner and the bottom corner diagonally opposite to it. [16]
- 5. Draw the projections of a regular hexagon of 25mm side, having one of its sides in the HP and inclined at 60° to the VP; and its surface making an angle of 45° with the HP. [16]
- 6. Draw the projections of a pentagonal pyramid, resting on one of its slant edges on HP and the axis parallel to VP. [16]
- 7. Draw (a) Front View (b) Top View (c) Side View: (Figure 2) [16]

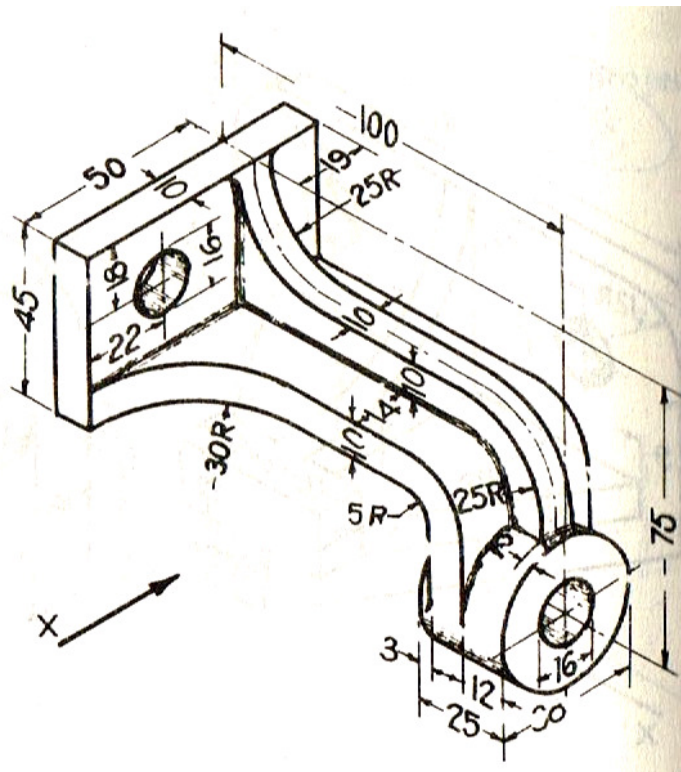


Figure 2

[16]



Subject Code: R13209/R13

Set No - 3

I B. Tech II Semester Regular/Supplementary Examinations May/June - 2016
ENGINEERING DRAWING

(ME)

Time: 3 hours

Max. Marks: 70

Question Paper Consists of **Part-A** and **Part-B**
Answering the question in **Part-A** is Compulsory,
Three Questions should be answered from **Part-B**

PART-A

- (a) A cube of 40mm side is resting on HP on one of its ends with its vertical faces equally inclined to VP. Draw the top, front and right side views.
(b) Draw the isometric view: (Figure 1)

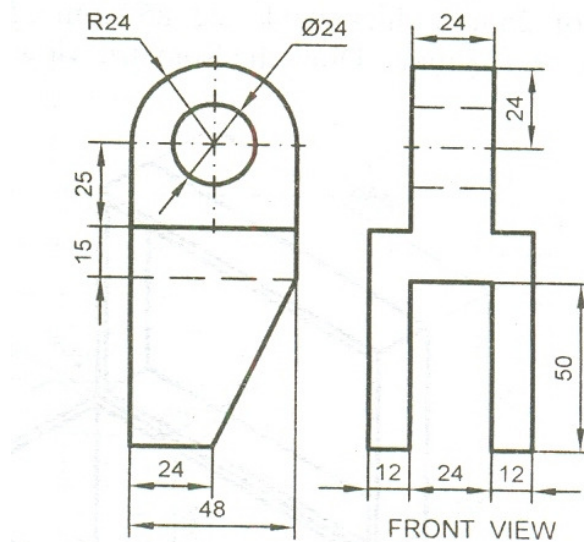


Figure 1

[12+10]

PART-B

- (a) Construct a pentagon of 30mm side.
(b) Construct a vernier scale to show readings of $1/10^{\text{th}}$ of a meter when 3cm represents 10m. Construct the scale to read up to 60m and mark the distances of 35.3m and 47.3m on your scale.
[8+8]
- (a) A point P is 15mm above the HP and 20mm in front of the VP. Another point Q is 25mm behind the VP and 40mm below the HP. Draw projections of P and Q keeping the distance their projectors equal to 90mm. Draw straight lines joining
(i) their top views and (ii) their front views.
(b) The front view of a line inclined at 30° to the VP is 65mm long. Draw the projections of the line, when it is parallel to and 40mm above the HP; its one end being 30mm in front of the VP.
[8+8]



4. A straight line AB has its end A 20mm above HP and 25mm in front of VP. The other end B is 60mm above HP and 65mm in front of VP. The ends of the line are on the same projector. Draw its projections. Find the true length, true inclinations of the line with HP and VP. Also, mark the traces. [16]
5. A rectangular plane surface of size L x W is positioned in the first quadrant and is inclined at an angle of 60° with the HP and 30° with the VP. Draw its projections. [16]
6. A pentagonal pyramid of 26mm side and 55mm height rests on one of its corners on HP with its axis parallel to both HP and VP. One of the base edges is perpendicular to HP. Draw its projections when its vertex lies on the right side. [16]
7. Draw (a) Front View (b) Left-hand Side View (c) Plan [16]

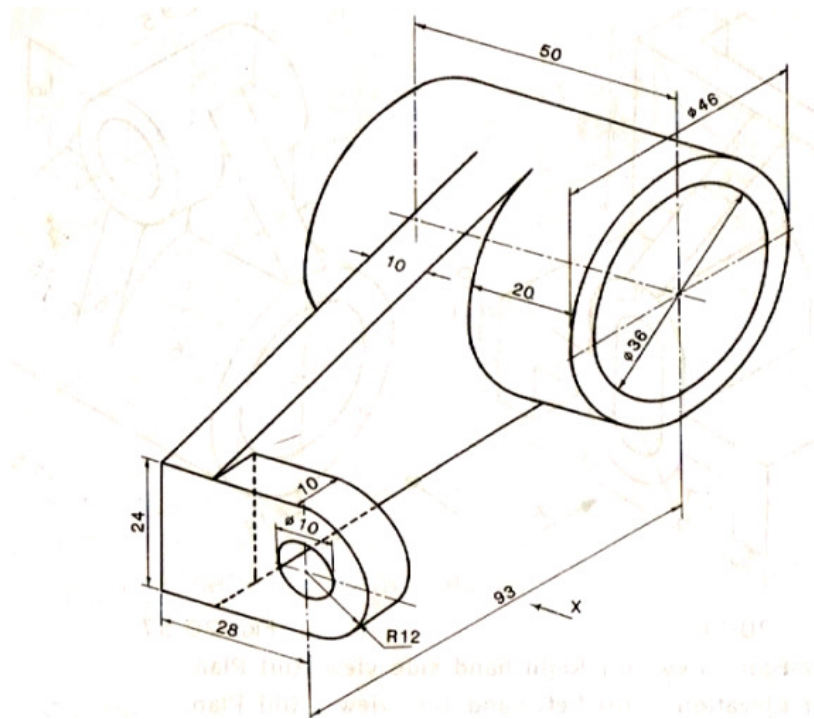


Figure 2

[16]



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PART-A

1. (a) A square ABCD of 50mm side has its corner A in the HP; its diagonal AC inclined at 30° to the HP, and the diagonal BD inclined at 45° to the VP and parallel to the HP. Draw its projections.
- (b) Draw the isometric view: (Figure 1)

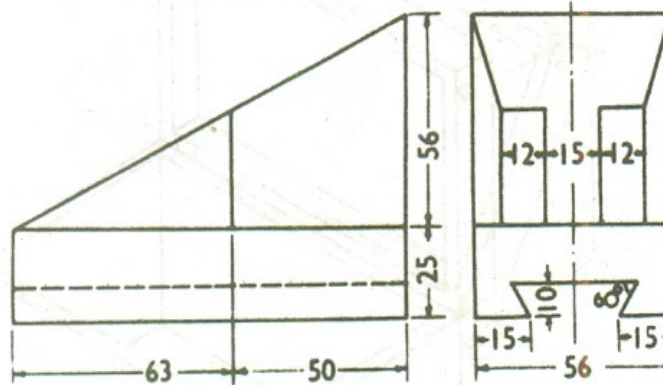


Figure 1

[12+10]

PART-B

2. (a) Construct a scale of RF=1/2.5 to show decimeters and centimeters and by a vernier to read millimeters, to measure up to 4 decimeters.
 - (b) The distance between two fixed points is equal to 75mm. A point P moves such that the sum of its distances from the two fixed points is always a constant and is equal to 90mm. Draw the locus of P and determine the minor axis.
- [8+8]
3. (a) A point 30mm above xy line is the top view of two points P and Q. The front view of P is 45mm above the HP while that of the point Q is 35mm below the HP. Draw the projections of the points and state their position with reference to the principal planes and the quadrant in which they lie.
 - (b) Draw the projections of a 75mm long straight line, in the following positions:
 - (i) Parallel to both the HP and VP and 25mm from each.
 - (ii) Perpendicular to the VP, 25mm above the HP and its one end in the VP.
 - (iii) Inclined at 30° to the HP and its one end 20mm above it; parallel to and 30mm in front of the VP.

[8+8]



4. The top view of a line CD has a length of 80mm and makes 30° with the horizontal. The end C is in VP and 52mm above HP. The end D is in HP. Draw the projections of the line. Find true length and true inclinations with HP and VP. Mark its traces on the two planes. [16]
5. A thin 30° - 60° set square has its longest edge in the VP and inclined at 30° to the HP. Its surface makes an angle of 45° with the VP. Draw its projections. [16]
6. A pentagonal pyramid of 25mm side of base and height 55mm is suspended freely from a corner such that axis is parallel to VP. Draw the three views. [16]
7. Draw (a) Front View (b) Top View (c) Side View: (Figure 2) [16]

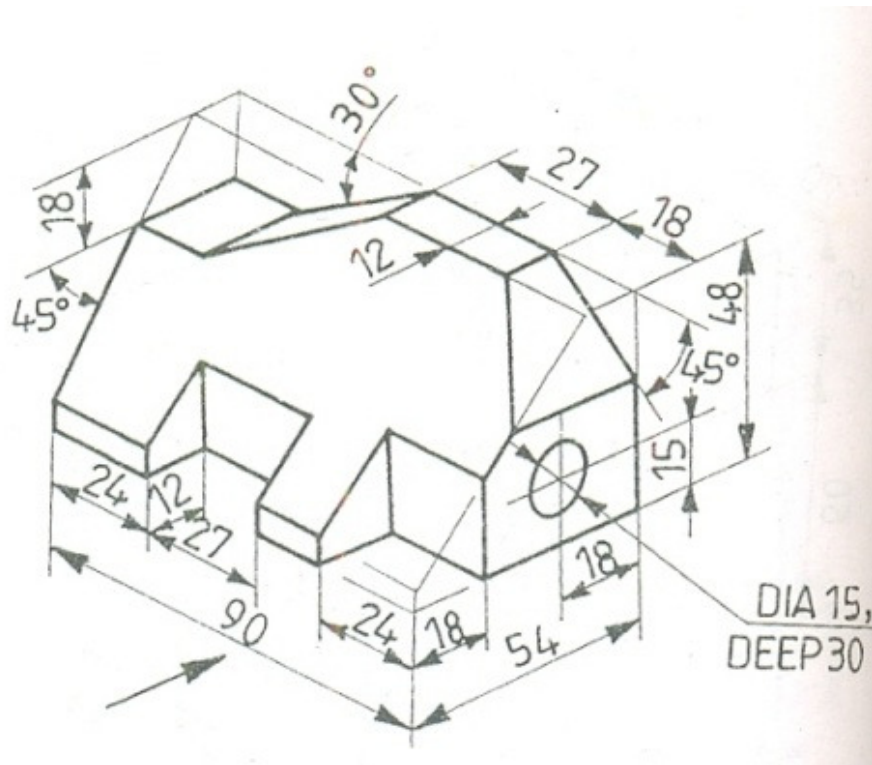


Figure 2

[16]

