

Subject Code: R13209/R13

Set No - 1

I B. Tech II Semester Supplementary Examinations Feb. - 2015

ENGINEERING DRAWING

(Common to CE, CSE, PCE, IT, Chem. E, Aero E, Auto E, Min E, Pet E, Metal E)

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) Draw Isometric view to the following projections.(As shown in Fig.1)

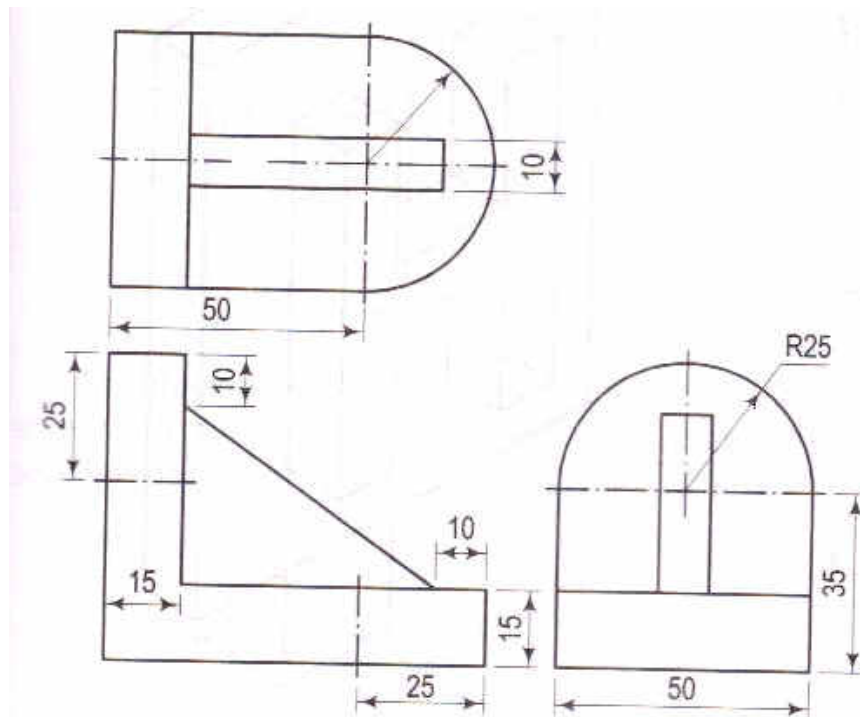


Fig.1

- (b) A plate having shape of an isosceles triangle has base 50mm long and altitude 70mm. It is also placed that in the front view it is seen as an equilateral triangle of 50mm sides and one side inclined at 45° to xy. Draw its top view.

[12+10]

PART-B

2. A boy throws a cricket ball from the top of a building 4m high. The ball crosses the top of a palm tree 9m high and falls on the ground. Distance between the building and the tree is 3m. Plot the path of the projectile.

[16]

3. (a) The top view of a 75mm long line measures 55mm. The line is in the VP; its one end being 25mm above the HP. Draw its projections.



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3. (b) Draw the projections of the following points on the same ground line, keeping the projectors 25mm apart.

- (i) A, in the HP and 20mm behind the VP
- (ii) B, 40mm above the HP and 25mm in front of the VP
- (iii) C, in the VP and 40mm above the HP

[8+8]

4. The projections of a line measure 80mm in the top view and 70mm in the front view. The mid-point of the line is 45mm in front of VP and 35mm above HP. One end is 10mm in front of VP and nearer to it. Draw the projections. Find true length and true inclinations with reference planes.

[16]

5. A thin circular plate of 70mm diameter is resting on its circumference such that its plane is inclined at 60° to the HP and 30° to the VP. Draw the projections of the plate.

[16]

6. A hexagonal prism with side of base 25mm and 50mm long is resting on a corner of its base on HP. Draw the projections of the prism when its axis is making 30° with HP and parallel to V.P.

[16]

7. Draw (i) Front View (ii) Both Side Views (iii) Top View of fig.2

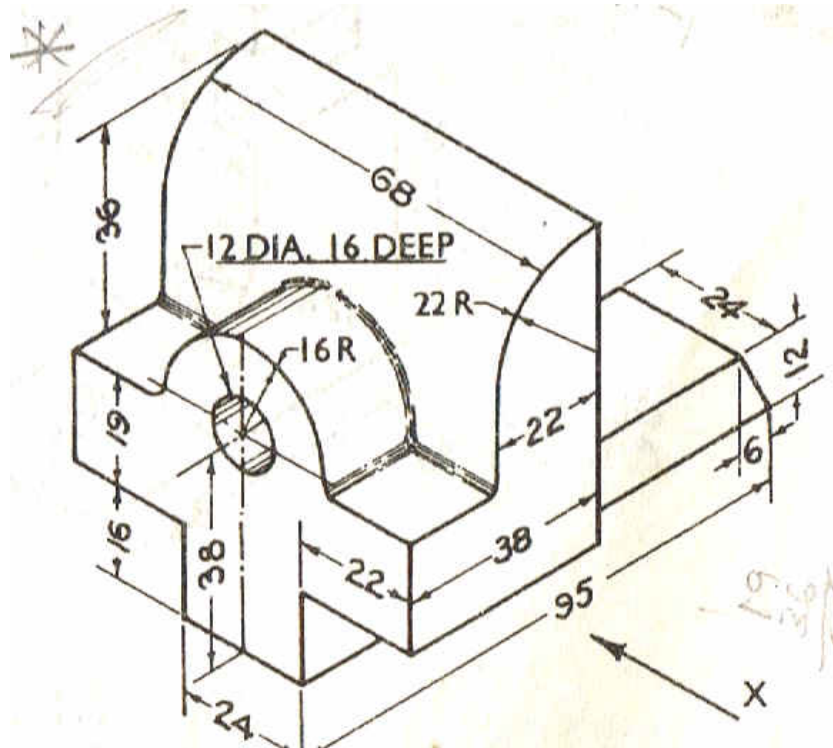


Fig.2

[16]



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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) Draw (i) Front View (ii) Top View (iii) Side View of Fig.1

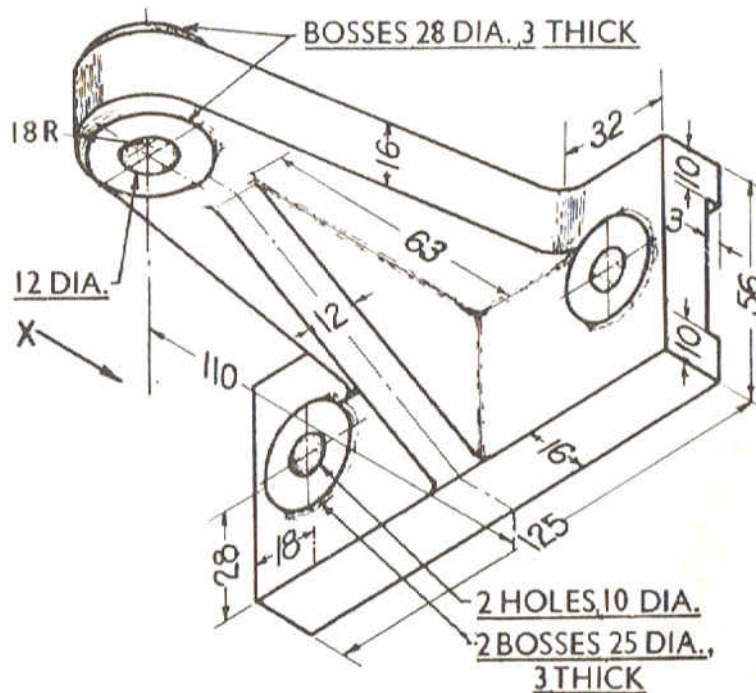


Fig.1

(b) 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.

[12+10]

PART-B

2. (a) Construct a regular hexagon of side 28mm when one side is vertical.

(b) A car is moving at a speed of 360 km/hour. Draw a diagonal scale to represent 6km by 1cm to show a maximum distance of 60 km. Measure the distance travelled by the car at 6 minutes 10 seconds.

[8+8]

3. (a) A 90mm long line is parallel to and 25mm in front of the VP. Its one end is in the HP while the other is 50mm above the HP. Draw its projections and find its inclination with the HP.



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3. (b) Two points A and B are in the HP. The point A is 30mm in front of the VP; while B is behind the VP. The distance between their projectors is 75mm and the line joining their top views makes an angle of 45° with xy . Find the distance of the point B from the VP. [8+8]
4. The midpoint M of a straight line AB is 60mm above HP and 50mm in front of VP. The line measures 80mm long and inclined at an angle of 30° to HP and 45° to VP. Draw its projections. [16]
5. A thin square plate EFGH of 40mm side is having its corner G on HP. Diagonal GE is inclined at 40° to HP and diagonal FH inclined at 40° to VP and parallel to HP. [16]
6. A pentagonal pyramid with side of base 30mm and axis 60mm long rests with an edge of its base on HP such that its axis is parallel to both HP and V.P. Draw the projection of the solid. [16]
7. Draw the isometric view of Fig.2 [16]

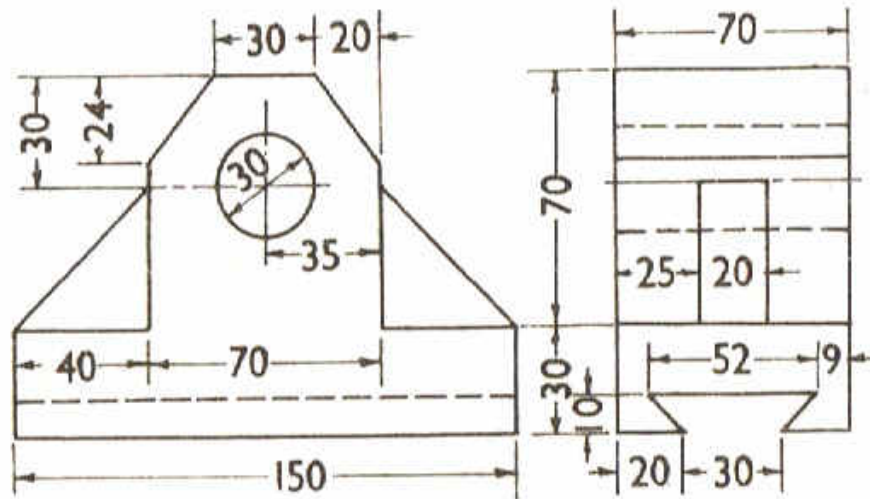


Fig.2

[16]



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ENGINEERING DRAWING

(Common to CE, CSE, PCE, IT, Chem. E, Aero E, Auto E, Min E, Pet E, Metal E)

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) Draw the isometric view of Fig.1

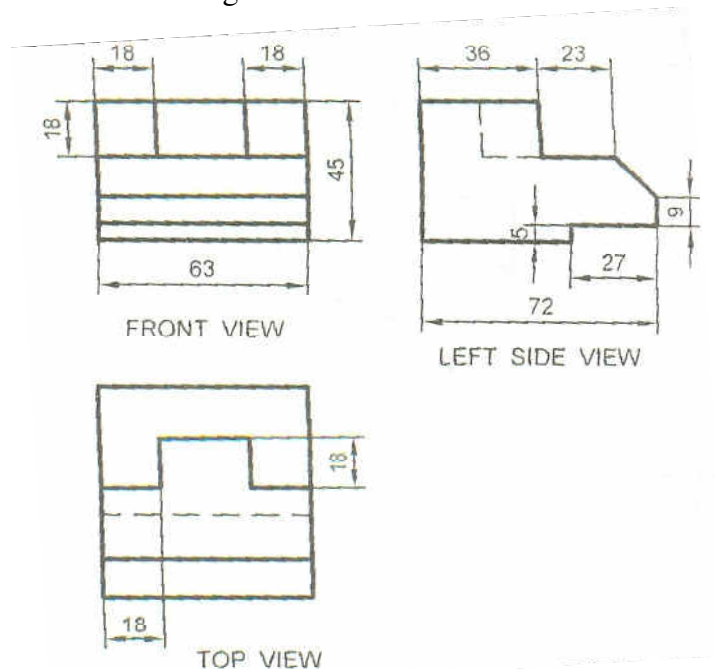


Fig.1

(b) A composite plate of negligible thickness is made up of a rectangle 60mm × 40 mm 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.

[12+10]

PART-B

2. Construct an ellipse when the major axis is 120mm and the distance between the foci is 108mm. Determine the length of the minor axis.

[16]

3. (a) 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.

(b) A point P is 20mm below HP and lies in the third quadrant. Its shortest distance from xy is 40mm. Draw its projections.

[8+8]



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4. A line measuring 80mm long has one of its ends 60mm above HP and 20mm in front of VP. The other end is 15mm above HP and in front of VP. The front view of the line is 60mm long. Draw the top view. [16]
5. Draw the projections of a circle of 75mm diameter having the end A of the diameter AB in the HP; the end B in the VP; and the surface inclined at 30° to the HP and at 60° to the VP. [16]
6. Draw the projections of a cone, base 50mm diameter and axis 75mm long, lying on a generator on the ground with the top view of the axis making an angle of 45° with the VP. [16]
7. Draw (i) Front View (ii) Side View from the right (iii) Top View of Fig.2 [16]

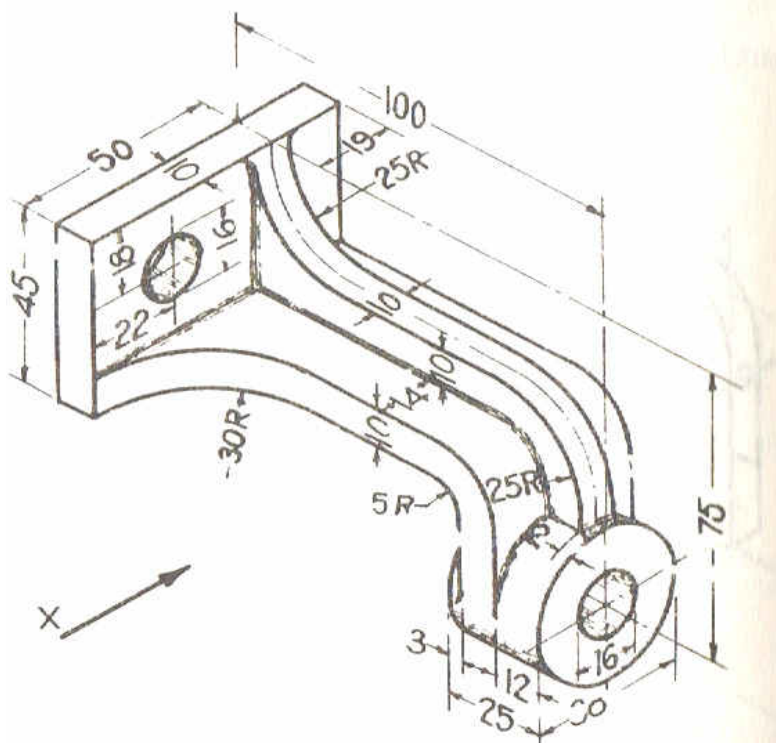


Fig.2

[16]



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Set No - 4

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ENGINEERING DRAWING

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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) Draw (i) Front View (ii) Left Hand Side View (iii) Top View of Fig.1

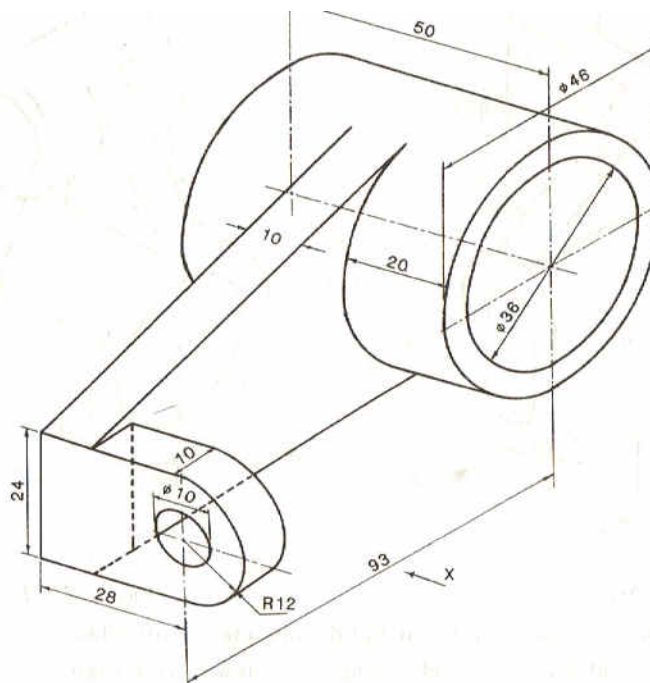


Fig.1

- (b) The top view of a plate, the surface of which is perpendicular to the VP and inclined at 60° to the HP is a circle of 60mm diameter. Draw its three views.

[12+10]

PART-B

2. (a) Construct a regular pentagon of side 30mm
 (b) Construct a Vernier scale of R.F=2 to show cm. $1/10^{\text{th}}$ of cm and $1/100^{\text{th}}$ of cm to read up to 9cm. Mark on the scale the lengths 7.02cm and 2.25cm.
3. (a) A point A is situated in the first quadrant. Its shortest distance from the intersection point of HP; VP and auxiliary plane is 60mm and it is equidistant from the principle planes. Draw the projections of the point and determine its distance from the principle planes.

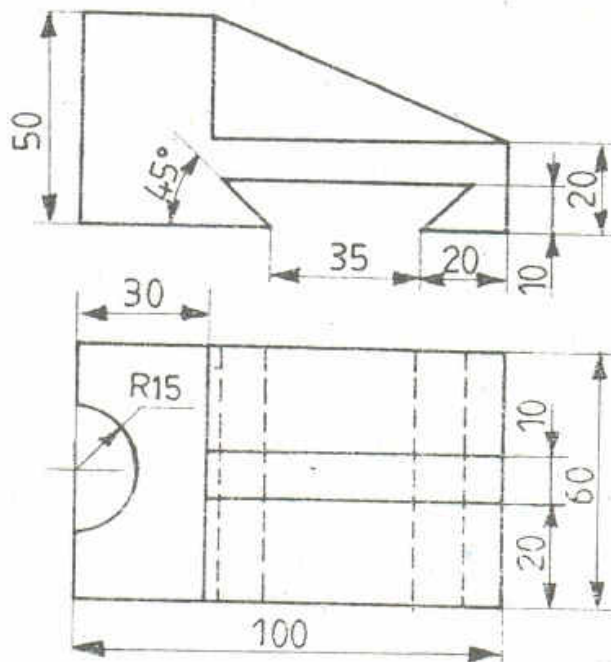
[8+8]



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3. (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 the true inclination with VP. [8+8]
4. A line AB 120mm long is inclined at 45° to HP and 30° to VP. Its midpoint C is in VP and 20mm above HP. The end A is in third quadrant and B is in first quadrant. Draw the projections of the line. [16]
5. Draw a semi-circular plate of 80mm diameter has its straight edge in the VP and inclined at 45° to the HP. The surface of the plate makes an angle of 30° of with the VP. Draw its projections. [16]
6. A tetrahedron of 75mm long edges has one edge parallel to the HP and inclined at 45° to the VP while a face containing that edge is vertical. Draw its projections. [16]
7. Draw the isometric view Fig.1 [16]



[16]

