Subject Code: R13209/R13 **Set No - 1**

I B. Tech II Semester Regular/Supplementary Examinations July/Aug. - 2015

ENGINEERING DRAWING

(Common to CE, 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**

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PART-A

1.(a) Draw the isometric view as shown in fig.1

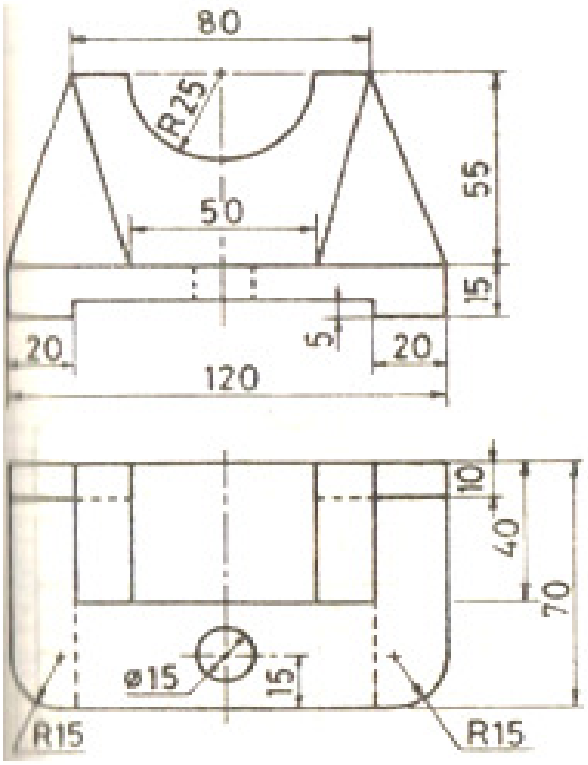


Fig.1 (Note: all dimensions are in mm)

(b) A cube of edges 40mm side is hung by a string attached to one of its corners. Draw its projections when two of its edges containing the corner from which it is hung are equally inclined to VP.

[12+10]

PART-B

2.(a) Draw a vernier scale of RF=2:1 to show centimeters and millimeters and long enough to measure up to 7cm. Measure a distance of 4.25cm on the scale.

(b) Draw an Octagon given the length of side 25mm

[8+8]

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.

(b) A line MN 50mm long is parallel to VP and inclined at 30^0 to HP. The end M is 20mm above HP and 10mm in front of VP. Draw the projections of the line. [8+8]

4. A line AB is 75mm long. A is 50mm in front of VP and 15mm above HP. B is 15mm in front of VP and is above HP. Top view of AB is 50mm long. Find the front view length and the true inclinations.

[16]

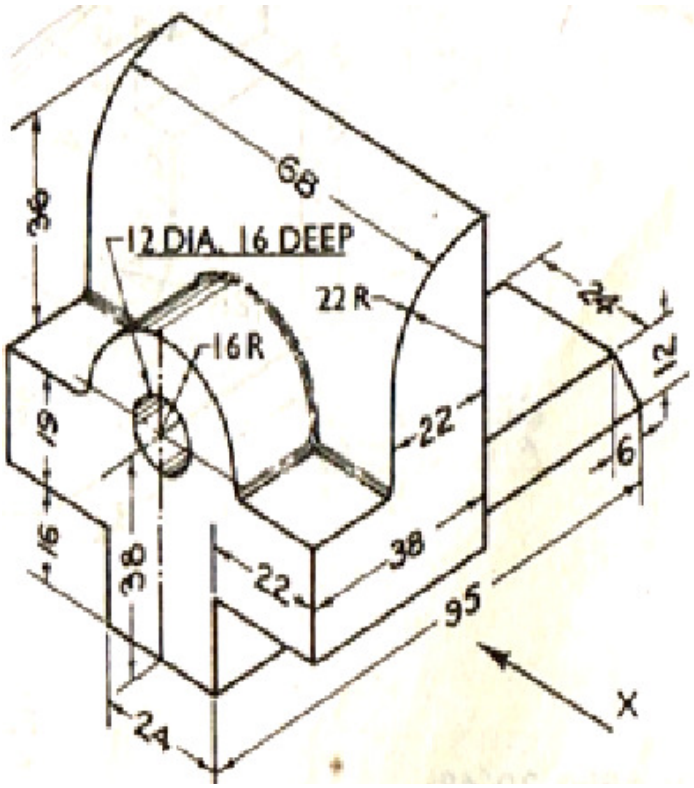
5. A regular hexagonal lamina of 26mm side has a central hole of 30mm diameter. Draw the front and top views when the surface of the lamina is inclined at 45^0 to HP. A side of lamina is inclined at 35^0 to VP.

[16]

6. An equilateral triangle of 60 mm side represents the front view of a cone standing on its base. It is tilted until its axis makes 30^0 with HP and top view of the axis is parallel to VP in this position. Draw the projections of cone.

[16]

7. Draw (i) Front View (ii) Side View (iii) Top View as shown in fig.2



[16]

Fig.2 (Note: all dimensions are in mm)

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Subject Code: R13209/R13 **Set No - 2**

I B. Tech II Semester Regular/Supplementary Examinations July/Aug. - 2015

ENGINEERING DRAWING

(Common to CE, 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**

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PART-A

1.(a) Draw (i) Front View (ii) Top View (iii) Side View as shown in fig.1

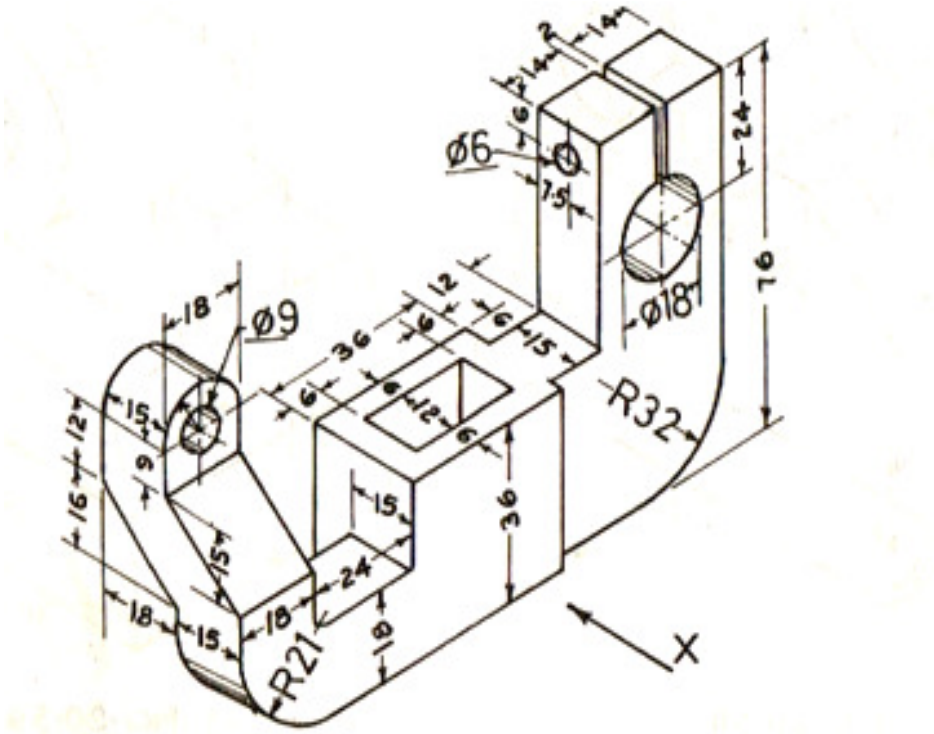

Fig.1 (Note: all dimensions are in mm)

(b) A circular plate of negligible thickness and 50mm diameter appears as an ellipse in the front view, having its major axis 50mm long and minor axis 30mm long. Draw its top view when the major axis of the ellipse is horizontal.

[12+10]

PART-B

2.(a) Construct a diagonal scale to read up to 1/100th of a meter given RF=1/50 and to measure up to 7m. Indicate a distance of 5.45m.

(b) Construct a regular polygon of any number of sides, given the length of its sides equal to 25mm.

[8+8]

|''|''|||''|'''|||'|

3.(a) Draw the orthographic projections of the following points:
(i) A, 20mm above HP and 30mm behind VP
(ii) B, 25mm below HP and 25mm in front of VP
(iii) C, 25mm below HP and 30mm behind VP
(iv) D, 30mm below HP and in VP

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

[8+8]

4. The top view of a line is 65mm long and is inclined at 30^0 to the reference line. One end is 20mm above HP and 10mm in front of VP. The other end is 60mm above HP and in front of VP. Draw the projections and find the true length of the line and its true inclinations to HP and VP.

[16]

5. A rhombus has its diagonals 80mm and 40mm long. The smaller diagonal is parallel to both HP and VP. The longer diagonal is inclined at 35^0 to HP. Draw the projections.

[16]

6. A pentagonal pyramid of base edge 25mm and altitude 60mm rests on one side of base on HP such that the highest base corner is 20mm above HP. Its axis is parallel to VP. Draw its projections.

[16]

7. Draw the isometric view as shown in fig.2

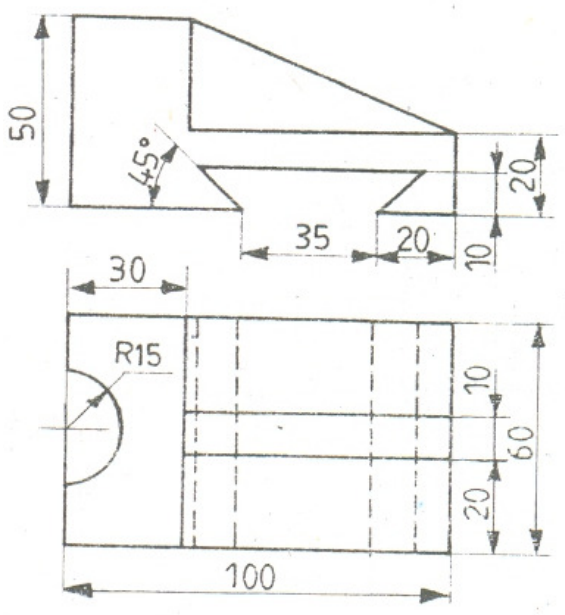

Fig.2 (Note: all dimensions are in mm)

[16]

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Subject Code: R13209/R13 **Set No - 3**

I B. Tech II Semester Regular/Supplementary Examinations July/Aug. - 2015

ENGINEERING DRAWING

(Common to CE, 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**

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PART-A

1.(a) Draw the isometric view as shown in fig.1

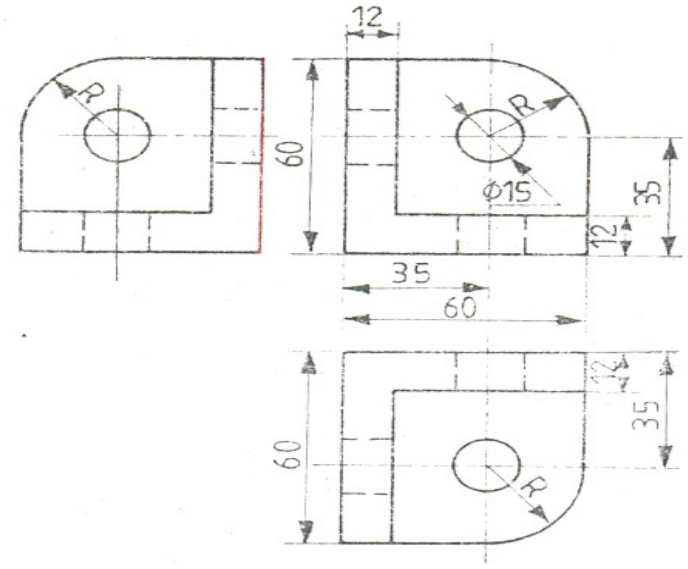


Fig.1(Note: all dimensions are in mm)

(b) A thin circular metal plate of 54mm diameter has a square hole of 27mm side, cut centrally through it. Draw the projections when the plate is resting on HP with its surface inclined at 30^0 to HP and an edge of the square hole perpendicular to VP.

[12+10]

PART-B

2.(a) 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.

(b) Construct a regular hexagon of side 28mm when one side is horizontal.

[8+8]

3.(a) A line MN 50mm long is parallel to VP and inclined at 30^0 to HP. The end M is 20mm above HP and 10mm in front of VP. Draw the projections of the line.

(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]

4. The distance between the projections of two points A and B is 70mm. A is 10mm above HP and 15mm in front of VP. B is 50mm above HP and 40mm in front of VP. Find the shortest distance between A and B by rotating line method. Find true inclinations of AB with VP and HP.

[16]

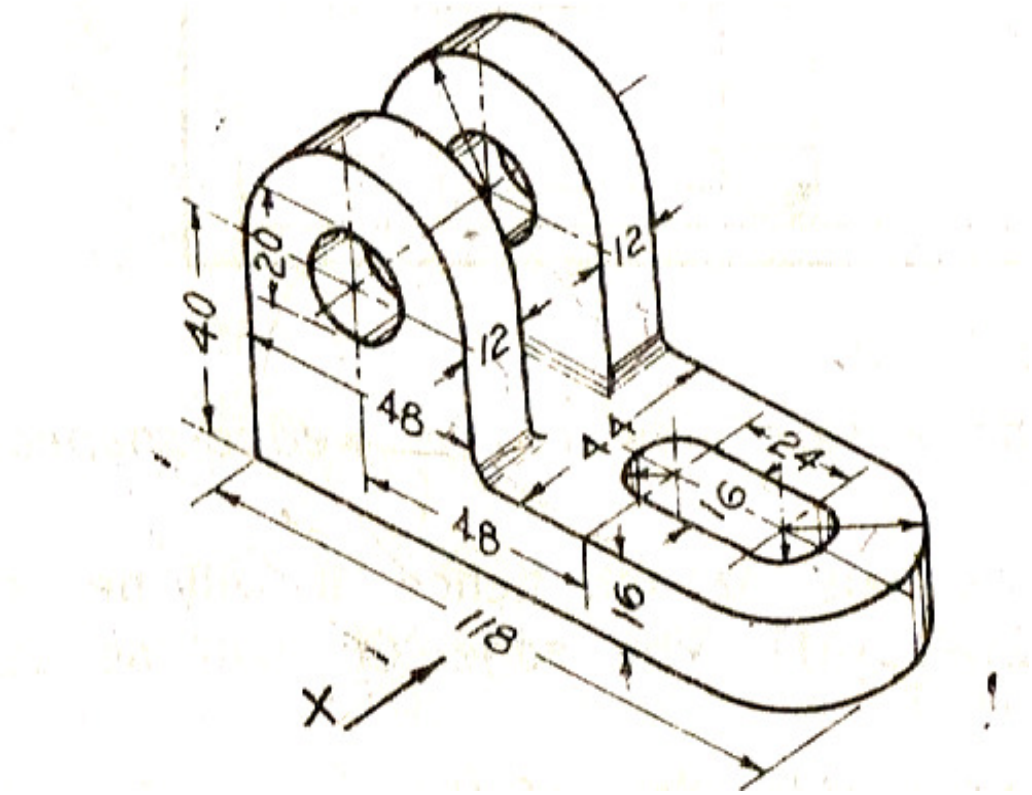
5. Draw the projections of a pentagonal sheet of 26mm side, having its surface inclined at 30^0 to VP. It's one side is parallel to VP and inclined at 45^0 to HP.

[16]

6. A cylinder of diameter of base 50mm and height 60mm is suspended freely from a point on its circular rim. The projection of the axis on HP is parallel to the XY line. Draw the projections of the cylinder.

[16]

7. Draw (i) Front View (ii) Side View from the right (iii) Top View as shown in fig.2



[16]

Fig.2 (Note: all dimensions are in mm)

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Subject Code: R13209/R13 **Set No - 4**

I B. Tech II Semester Regular/Supplementary Examinations July/Aug. - 2015

ENGINEERING DRAWING

(Common to CE, 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**

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PART-A

1.(a) Draw (i) Front View (ii) Top View (iii) Side View, as shown in fig.1

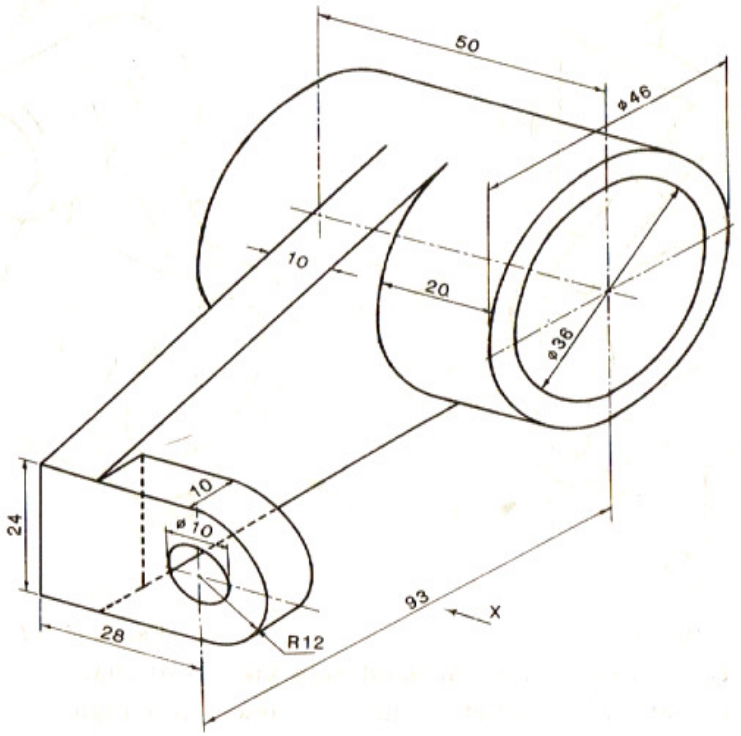

Fig.1 (Note: all dimensions are in mm)

(b) A regular hexagon of 40mm side has a corner in the HP. Its surface is inclined at 45^0 to the HP and the top view of a diagonal through the corner which is in the HP makes an angle of 60^0 with the VP. Draw the projections.

[12+10]

PART-B

2. The major axis of an ellipse is 150mm long and the minor axis is 100mm long. Find the foci and draw the ellipse by arcs of circles method. Draw a tangent to the ellipse at a point on it 25mm above the major axis.

[16]

3.(a) Draw the orthographic projections of the following points:
(i) Point Q is 25mm above HP and 35mm behind VP
(ii) Point P is 30mm above HP and 40mm in front of VP
(iii) Point R is32mm below HP and 45mm behind VP
(iv) Point S is 35mm below HP and 42mm in front of VP

|''|''|||''|'''|||'|

3.(b) A line AB 50mm long is perpendicular to VP and parallel to HP. Its end A is 20mm in front of VP and the line is 40mm above HP. Draw the projections of the line.

[8+8]

4. The projections of a line measure 80mm in the top view and 70mm in the front view. The midpoint 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 rectangular lamina EFGH of 60mm length and 36mm width is inclined at an angle of 45^0 to VP. Its longer edge is making an angle of 30^0 with VP. Draw the projections.

[16]

6. A tetrahedron of 40 mm side rests with one of its edges on HP and perpendicular to VP. The triangular face containing that edge is inclined at 30^0 to HP. Draw its projections.

[16]

7. Draw the isometric view as shown in fig.2

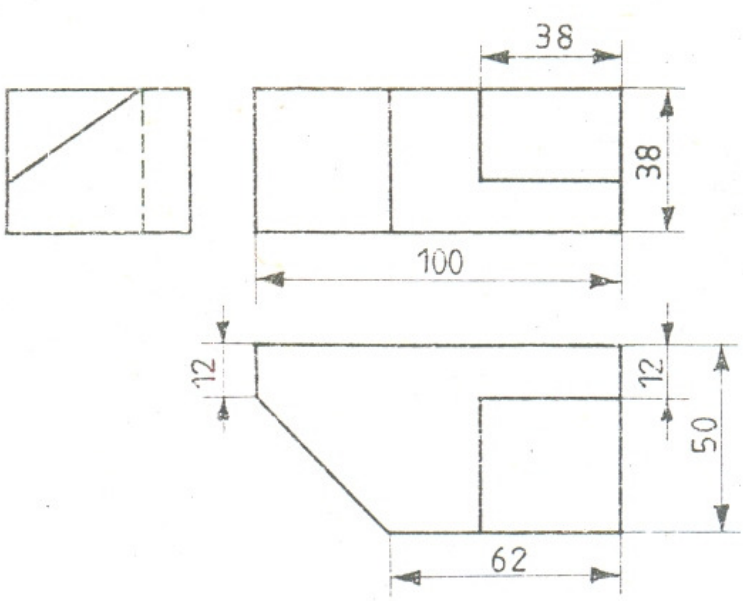

Fig.2 (Note: all dimensions are in mm)

[16]

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