

**Subject Code : R10205/R10****Set No - 1****I B.Tech II Semester Supplementary Examinations January / February - 2012****ENGINEERING DRAWING****(Common to Computer Science & Engineering, Electronics & Instrumentation Engineering, & Electronics & Computer Engineering)****Time: 3 hours****Max. Marks : 75****Answer any FIVE Questions  
All Questions carry equal marks****\* \* \* \* \***

1. Two fixed points P and Q are 120 mm apart. Trace the complete path of a point A moving in the same plane as that of P and Q in such a way that, the sum of its distances from P and Q is always the same and equal to 150 mm. Name the curve. Draw another curve 30 mm away from this curve. [15M]
- 2.(a) Draw the projections of a 100 mm long straight line, in the following positions.
  - (i) Parallel to both the H.P. and the V.P. and 40 mm in front of the V.P. and 20 mm above the H.P.
  - (ii) Inclined at  $60^\circ$  to the H.P. and its one end 20 mm above it; parallel to and 40 mm in front of the V.P.
- (b) The length of the top view of a line parallel to the V.P. and inclined at 30 degrees to the H.P. is 50 mm. one end of the line is 20 mm above the H.P. and 30 mm in front of the V.P. Draw the projections of the line and determine its true length. [7M + 8M]
3. The front view of a line AB measures 70 mm and makes an angle of 45 degrees with xy. A is in the H.P. and the V.T. of the line is 15 mm below the H.P. The line is inclined at 30 degrees to the V.P. Draw the projections of AB and find its true length, inclination with the H.P. and its H.T. [15M]
4. A circular plate of 60 mm diameter appears as an ellipse in the front view, having its major axis 60 mm long and minor axis 40 mm long. Draw its top view when the major of the ellipse is horizontal. [15M]
5. A cube of 60 mm long edges is resting on the ground on one of its edges. Its axis makes an angle of 60 degrees with the H.P and parallel to the V.P. Draw its projections. [15M]
6. A square pyramid of base 50 mm side and axis 80 mm long is placed on the ground on one of its slant edges, so that the vertical plane passing through that edge and the axis makes an angle of 45 degrees with the V.P. Draw its projections. [15M]

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Set No - 1

7. Projections of a casting are given in Fig. 1. Draw the isometric view of the casting.

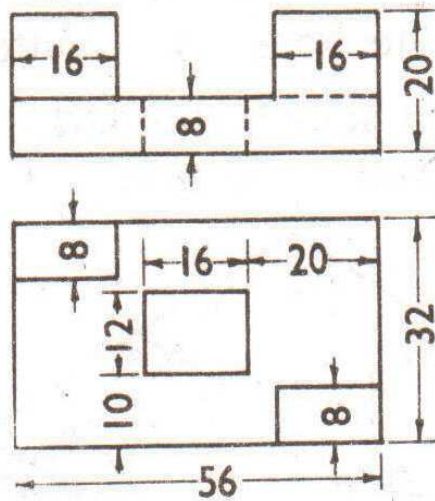


Fig. 1

8. Pictorial view of an object is shown in Fig. 2. Draw, to the scale of full size, the following views.  
 (a) Front view  
 (b) Top view  
 (c) Side view

[15M]

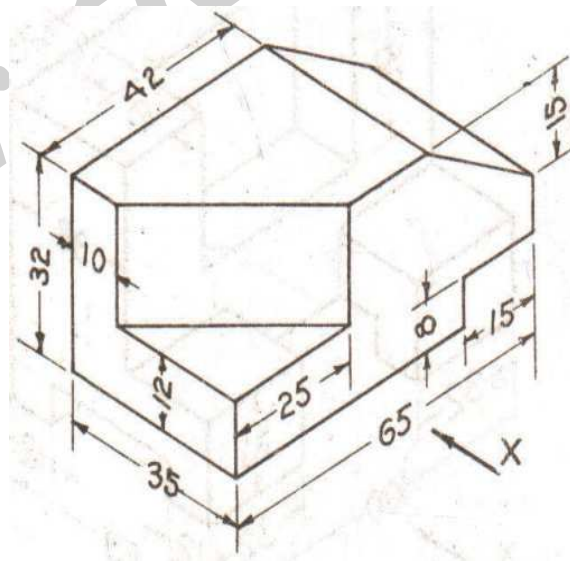


Fig. 2

[15M]

**Subject Code : R10205/R10**

**Set No - 2**

**I B.Tech II Semester Supplementary Examinations January / February - 2012**

**ENGINEERING DRAWING**

**(Common to Computer Science & Engineering, Electronics & Instrumentation Engineering, & Electronics & Computer Engineering)**

**Time: 3 hours**

**Max. Marks : 75**

**Answer any FIVE Questions  
All Questions carry equal marks**

**\* \* \* \* \***

1. Draw a diagonal scale of 1:3 to show centimetres and millimetres and long enough to measure up to 18 centimetres. Mark a distance of 9.6 cm. [15M]
- 2.(a) The front view of a 100 mm long line measures 60 mm. The line is in the horizontal plane and one of its ends is 30 mm in front of the V.P. Draw the projections of the line and determine its inclination with the V.P.  
(b) Draw the projections of 90 mm long straight line in the following positions.
  - (i) inclined at 60 degrees to the H.P. and its one end is 15 mm above the H.P; parallel to and 20 mm in front of V.P.
  - (ii) inclined at 30 degrees to the V.P. and its one end is 10 mm in front of it; parallel to and 25 mm above the H.P.[7M + 8M]
3. A line AB, 70 mm long, has its end A in both the H.P. and the V.P. It is inclined at 30 degrees to the H.P. and at 60 degrees to the V.P. Draw the projections of the straight line. [15M]
4. Draw a rhombus of diagonals 120 mm and 100 mm long, with the longer diagonal horizontal. The figure is the top view of square of 120 mm long diagonals, with a corner on the ground. Draw its front view and determine the angle which its surface makes with the ground. [15M]
5. Draw the projections of a cylinder of 60 mm diameter and 100 mm long, lying on the ground with its axis inclined at 60 degrees to the V.P. and parallel to the ground. [15M]
6. A hexagonal pyramid of base 30 mm side and axis 60 mm long has an edge of its base on the ground. Its axis is inclined at 60 degrees to the ground and parallel to the V.P. Draw its projections. [15M]

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**Set No - 2**

7. Projections of a casting are given in Fig. 1. Draw the isometric view of the casting.

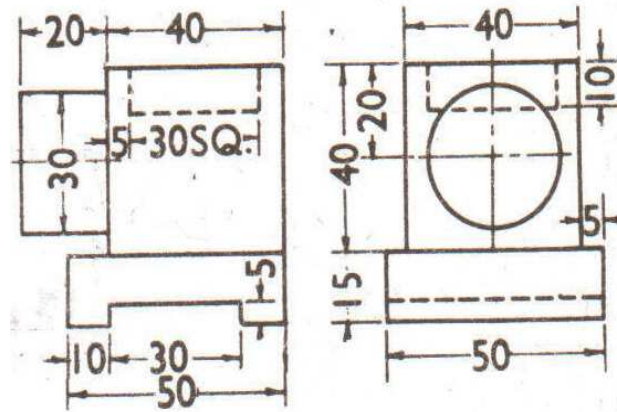


Fig. 1

[15M]

8. Pictorial view of an object is shown in Fig. 2. Draw, to the scale of full size, the following views.

- (a) Front view
- (b) Top view
- (c) Side view

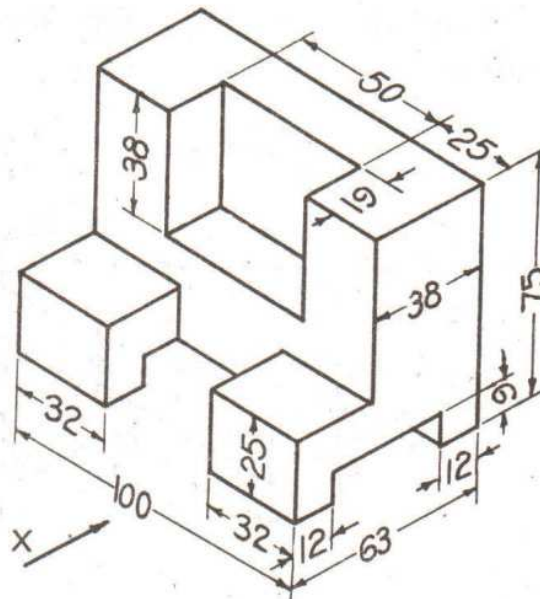


Fig. 2

[15M]

**Subject Code : R10205/R10**

**Set No - 3**

**I B.Tech II Semester Supplementary Examinations January / February - 2012**

**ENGINEERING DRAWING**

**(Common to Computer Science & Engineering, Electronics & Instrumentation Engineering, & Electronics & Computer Engineering)**

**Time: 3 hours**

**Max. Marks : 75**

**Answer any FIVE Questions  
All Questions carry equal marks**

**\* \* \* \* \***

1. Draw a vernier scale of representative fraction equal to  $1/25$  to read centimetres up to 3 metres and on it show lengths representing 0.91 m.  
[15M]
- 2.(a) A line AB, 80 mm long, is parallel to and 20 mm above the H.P. Its end A is 20 mm in front of the V.P. and the line makes an angle of 30 degrees with the V.P. Draw the projections of the line.  
(b) Draw the projections of a 120 mm long line for the following positions.  
(i) Perpendicular to the V.P., 40 mm above the H.P. and its one end in the V.P.  
(ii) Parallel to and 50 mm in front of the V.P. and in the H.P.  
[7M + 8M]
3. The straight line AB is inclined at 30 degrees to H.P., while its top view at 45 degrees to line xy. The end A is 20 mm in front of the V.P. and it is below the H.P. The end B is 75 mm behind the V.P. and it is above the H.P. Draw the projections of the line when its V.T. is 40 mm below. Find the true length of the portion of the straight line which is in the second quadrant and locate its H.T.  
[15M]
4. A plane figure is composed of an equilateral triangle ABC and a semi-circle on AC as diameter. The length of the side AB is 40 mm and is parallel to the V.P. The corner B is 15 mm behind the V.P. and 10 mm below the H.P. The plane of the figure is inclined at 60 degrees to the H.P. Draw the projections of the plane figure.  
[15M]
5. Draw the projections of a pentagonal prism, base 20 mm side and axis 60 mm long, resting on one of its rectangular faces on the H.P. with the axis inclined at 60 degrees to the V.P.  
[15M]
6. Draw the projections of a cone, base 50 mm diameter and axis 90 mm long, having one of its generators in the V.P. and inclined at 30 degrees to the H.P., the apex being in the H.P.  
[15M]

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**Set No - 3**

7. Projections of a casting are given in Fig. 1. Draw the isometric view of the casting.

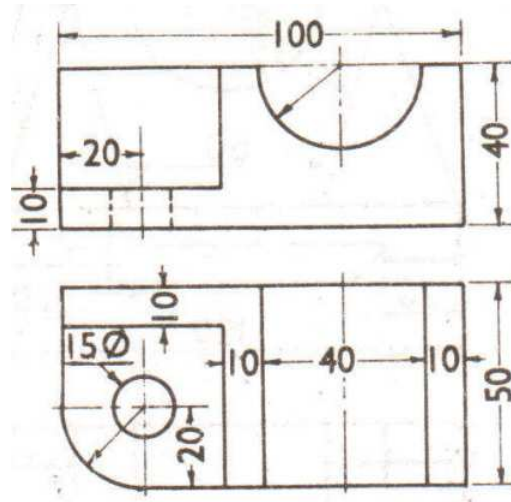


Fig. 1

[15M]

8. Pictorial view of an object is shown in Fig. 2. Draw, to the scale of full size, the following views.

- (a) Front view
- (b) Top view
- (c) Side view

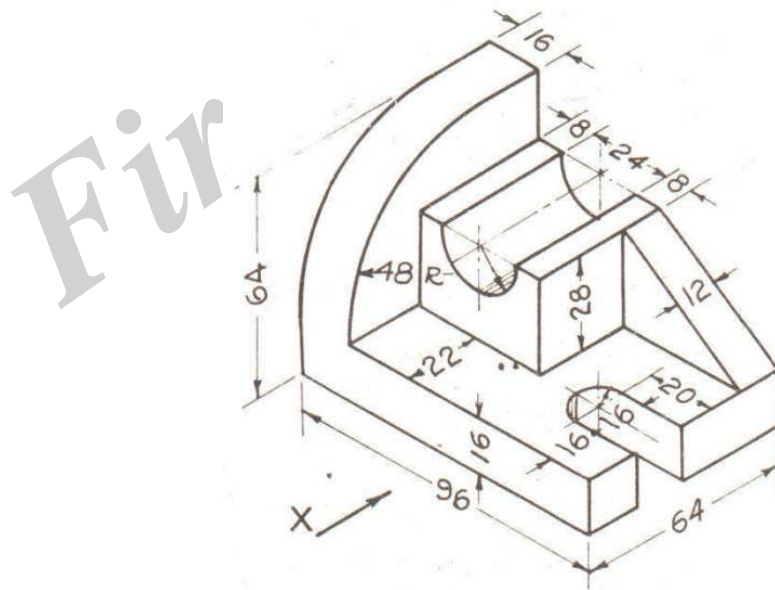


Fig. 2

[15M]

**Subject Code : R10205/R10****Set No - 4****I B.Tech II Semester Supplementary Examinations January / February - 2012****ENGINEERING DRAWING****(Common to Computer Science & Engineering, Electronics & Instrumentation  
Engineering, & Electronics & Computer Engineering)****Time: 3 hours****Max. Marks : 75****Answer any FIVE Questions  
All Questions carry equal marks****\* \* \* \* \***

1. Inscribe an ellipse in a parallelogram having sides 120 mm and 80 mm long and an included angle of 120 degrees. [15M]
- 2.(a) Draw the orthographic projection of four points P, Q, R and S about a single reference line, keeping the projections 20 mm apart.
  - (i) P in the horizontal plane (H.P.) and 20 mm in front of the vertical plane (V.P.)
  - (ii) Q 15 mm above the H.P. and 20 mm in front of the V.P.
  - (iii) R 25 mm below the H.P. and 40 mm behind the V.P.
  - (iv) S 30 mm below the H.P. and 25 mm in front of the V.P.
- (b) A 100 mm long line is parallel to and 40 mm above the H.P. Its two ends are 15 mm and 50 mm in front of the V.P. respectively. Draw its projections and its inclination with the V.P. [7M + 8M]
3. The end P of a line PQ is 25 mm behind the V.P. and is below the H.P. The end Q is 12 mm in front of the V.P. and is above the H.P. The distance between the projectors is 65 mm. The line is inclined at 40 degrees to the H.P. and its H.T. is 20 mm behind the V.P. Draw the projections of the line and determine its true length and the V.T. [15M]
4. Draw the projections of a regular hexagon of 30 mm side, having one of its sides in the H.P. and inclined at 30 degrees to the V.P., and its surface making an angle of 60 degrees with the H.P. [15M]
5. A hexagonal prism of base 40 mm side and axis 80 mm long, has an edge of the base parallel to the H.P. and inclined at 30 degrees to the V.P. Its axis makes an angle of 45 degrees with the H.P. Draw its projections. [15M]
6. A regular pentagonal pyramid, base 40 mm side and height 90 mm rests on one edge of its base on the ground so that the highest point in the base is 25 mm above the ground. Draw its projections when the axis is parallel to the V.P. [15M]

**Subject Code : R10205/R10**

**Set No - 4**

7. Projections of a casting are given in Fig. 1. Draw the isometric view of the casting.

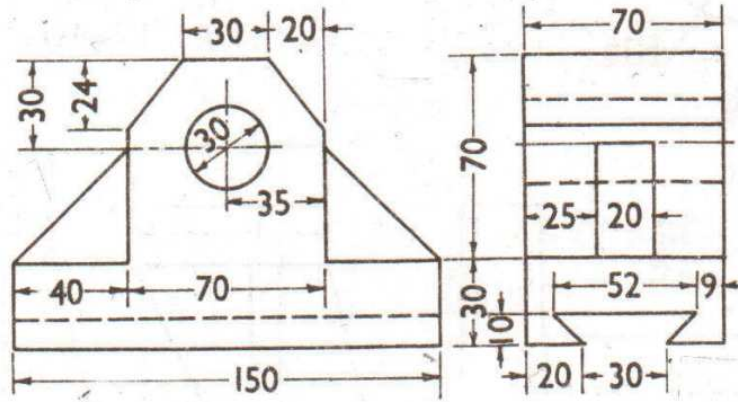


Fig. 1

[15M]

8. Pictorial view of an object is shown in Fig. 2. Draw, to the scale of full size, the following views.

- (a) Front view
- (b) Top view
- (c) Side view

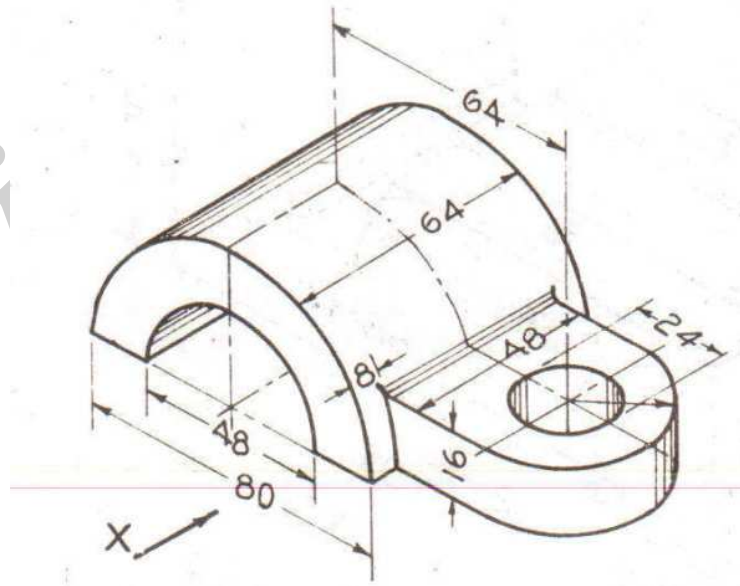


Fig. 2

[15M]