Subject Code-: R10205/R10 **Set No - 1**

I B.Tech II Semester Regular Examinations June - 2012

ENGINEERING DRAWING

(Common to Bio Medical Engineering, Civil Engineering, Mechanical Engineering, Chemical Engineering, Aeronautical Engineering, Automobile Engineering, Petroleum Technology)

Time: 3 hours **Max. Marks : 75**

Answer any FIVE Questions
All Questions carry equal marks

* * * * *

1.(a) Construct a scale of R.F. = 1/2.5 to show decimeters and centimeters and by a vernier to read millimeters, to measure upto 4 decimetres. Show a distance of 25.6 cm on it.

(b) Construct a ellipse of 60mm major axis and 40mm minor axis.

[7M + 8M]

2. Two vertical lines CD and EF have points C and E on HP. The lenghts of the lines are 30mm and 60mm respectively. Both the lines are 40mm infront of VP. Draw the projections of the line DF if the distance between the vertical lines is 50mm. Determine the inclination of the line DH with the HP.

[15M]

3. The distance between the end projectors of a straight line AB is 50mm. The end B is 60mm above HP and 50mm in front of VP. The end A is 10mm above HP. The line AB is inclined at 30^0 to HP. Draw the projections and determine the inclination of the line with VP. Also determine the true length of the line.

[15M]

4. Draw the projections of a circle plane which is inclined at 30^0 to the HP and 60^0 to the VP. One end of a diameter of the circle is in HP while its other end is in VP.

[15M]

5. A regular triangular pyramid, base 25 mm side, axis 50 mm long is resting on the HP on one of its edges of the base. Its axis is parallel to the HP and inclined at 30^0 to the VP. Draw the projections.

[15M]

6. Draw three views of a cylinder of base circle diameter 40mm and axis length 75mm when it is restind on a generator in HP. The axis of the cylinder is perpendicular to the VP.

[15M]

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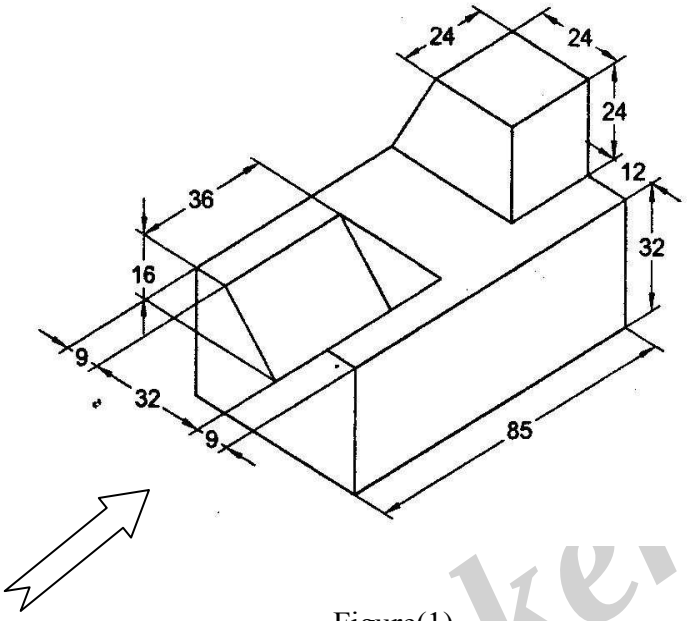
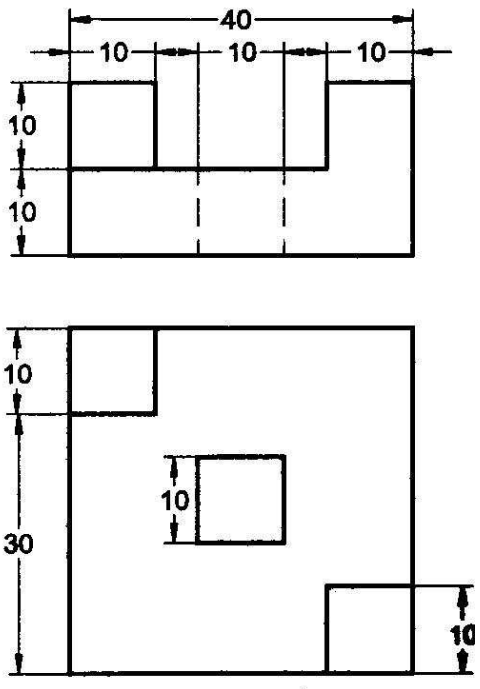
7. Draw the front view, top view and right side view of the block shown in figure(1) shown below.



Figure(1)

[15M]

8. Draw the isometric projection of the block whose projections are shown in figure(2) below.



Figure(2)

[15M]

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Answer any FIVE Questions
All Questions carry equal marks

* * * * *

1.(a) Construct a heptagon of side 40mm with a side vertical.
(b) Construct an ellise of vertical major axis 100mm and horizontal monor axis 75mm long. [7M + 8M]

2.(a) Draw the projections of a point P when it is 35mm from the HP and VP in all possible positions.
(b) Draw the projections of a 70mm long line CD, when it is parallel to and 30mm above the HP and end C is 25mm infront of VP. Find the inclination of the line with the VP. [7M + 8M]

3. A straight line *AB* is 100mm long. Its one end is in *VP* and the other end is in *HP*. Its top and front views measure 75mm and 85 mm respectively. Draw its projections and determine its inclinations with the HP and the VP. [15M]

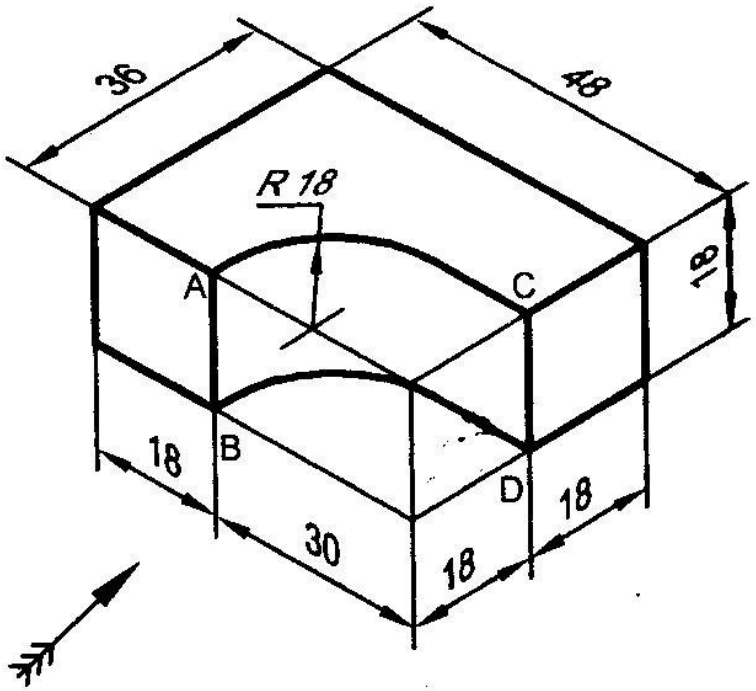
4. A regular hexagon of 40 mm side has a corner in the HP. Its surface is inclined at 45^0 to the HP and the top view of the diagonal through the corner which is in the HP makes an angle of 60^0 with the VP. Draw its projections. [15M]

5. A triangular prism of 30mm side of base and axis length 65mm is suspended freely from a corner such that the axis is parallel to VP. Draw its projections. [15M]

6. A cone of 70mm diameter of base and height 80mm is freely suspended from a point on its base such that the the axis is parallel to the VP. Draw its projections. [15M]

Subject Code-: R10205/R10 **Set No - 2**

7. Draw the front view, top view, left side view and right side view of the block shown in figure(1) shown below.



Figure(1)

[15M]

8. A frustum of a square pyramid is of bottom edge 50 mm, top edge 25mm and height 50mm. Draw the isometric view of the frustum when it is resting on its base on HP and an edge of the base is inclined at 30^0 to VP.

[15M]

Subject Code-: R10205/R10 **Set No - 3**

I B.Tech II Semester Regular Examinations June - 2012

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Time: 3 hours **Max. Marks : 75**

Answer any FIVE Questions
All Questions carry equal marks

* * * * *

1.(a) Draw a diagonal scale of RF 1/3 and long enough to measure 30cm. Show a distance of 12.5 cm onit.

(b) Construct a pentagon inscribed in a circle of 50mm diameter.

[7M + 8M]

2.(a) Draw the projections of the points P,Q,R,S keeping the ditance between the projectors as 25mm. Point P is 20mm infront of VP and in HP. Qis 30mm infront of VP and 20mm above HP. R is 30mm below HP and 30mm behind VP. S is in both HP and VP.

(b) Draw the projections of a 60mm long line CD when it is perpendicular to the HP and end C in HP. Draw the projections of the line when it is in I.quadrant and in III.quadrant. The line is 30mm from VP.

[7M + 8M]

3. A line AB, inclined at 40º to the VP has its ends 50 mm and 20 mm above the HP. The length of its front view is 65 mm and its VT is 10 mm above the HP. Determine the true length of AB, its inclination with the HP and its HT.

[15M]

4. A regular hexagonal of 50mm side has a central hole of 30mm diameter . Draw ther 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 .

[15M]

5. Draw the projections of a hexagonal prism of 30mm side and axis 50mm when resting on one of its rectangular face on HP and axis inclined at 40^0 to VP.

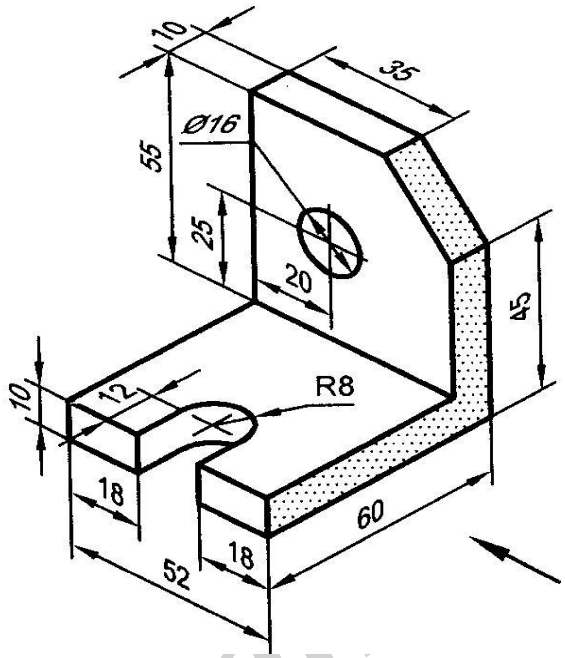
[15M]

6. Draw the three views of the cone, base 50mm diameter and axis 75mm long, having one of its generators and apex in the VP and the axis parallel to the HP.

[15M]

Subject Code-: R10205/R10 **Set No - 3**

7. Draw the front view, top view and left side view of the block shown in figure(1) shown below.



Figure(1)

[15M]

8. A square pyranid of base side 30mm and axis length 40mm is resting centrally on top of a square prism of of side of base 40mm and axis length 50mm. Two lateral faces of the prism are parallel to VP, while base edges of the pyramid are inclined at 45^0 to the VP. Draw the isometric projection of the composite solid.

[15M]

Subject Code-: R10205/R10 **Set No - 4**

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ENGINEERING DRAWING

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Time: 3 hours **Max. Marks : 75**

Answer any FIVE Questions
All Questions carry equal marks

* * * * *

1. The distance between two fixed points is 75mm.A point P moves such that the sum of its distance from two fixed points is always a constant and is equal to 90mm . Draw the locus of P and determine the axes lengths. [15M]
2. Draw the projections of a 70mm long lineCD when end C is 10mm infront of VP and 30mm below HP. End D is 25mm above HP and 10mm infront of VP. Find the inclination of the line with the HP. What is the distance between the end projectors? [15M]
3. A room is 4.8 m × 4.2 m × 3.6 m high. Determine graphically the distance between the centre of the ceiling and a bottom corner. [15M]
4. A square plate PQRS of negligible thickness ha 35mm side. It is lying on a corner R on HP. One of the diagonals RP is inclined at 35^0 HP and 40^0 to the VP. The two sides QR and RS containing the corner R are equal inclined to the HP. Draw the projection of the plate. [15M]
5. A cylinder, 65mm diameter and 90 mm long, has its axis parallel to the HP and inclined at 30º to the VP. Draw its projections. [15M]
6. A pentagonal prism edge of base 30mm and axis 60mm long is resting on a edge of the in the HP and axis an angle of 60^0 with the HP and parallel to the VP. Draw the projections. [15M]

Subject Code-: R10205/R10 **Set No - 4**

7. Draw the front view, top view and right side view of the block shown in figure (1) shown below.

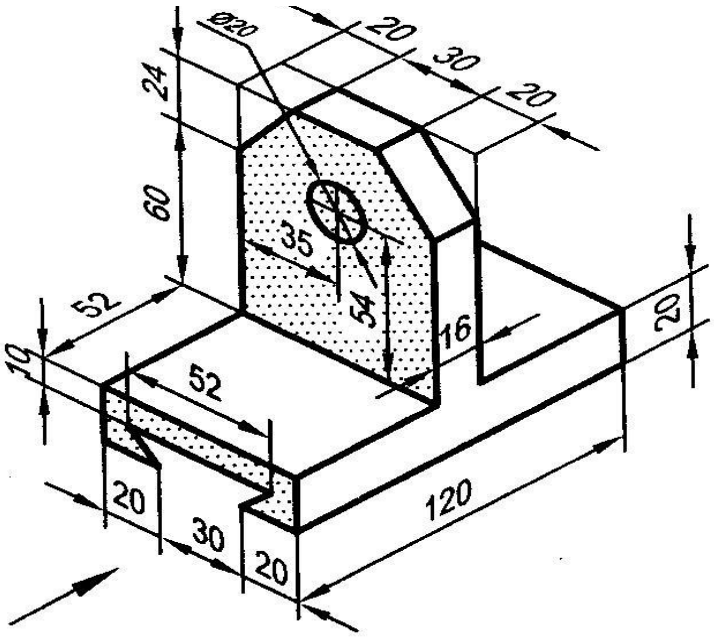

Figure (1)

[15M]

8. Draw the isometric projection the frustum of a hexagonal pyramid is of bottom edge 50 mm, top edge 25mm and height 50mm. It is resting on its base on ground and an edge of the base is parallel to VP.

[15M]