Subject Code-: R10205/R10

Set No - 1

I B.Tech II Semester Regular Examinations June - 2012
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Biotechnology)

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

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

1. An ellipse has the major axis and the minor axis in the ratio of 3:2. Draw the ellipse when the major axis is 135 mm.

[15M]

2.(a) A point 25 mm above XY line is the front view of two points E and F. The top view of E is 35 mm behind VP, and the top view of F is 40 mm in front of VP. Draw the projections of the two points and state their positions with reference planes and quadrants in which they lie.

  (b) Draw the projections of a 75 mm long straight line, inclined at 30^0 to VP with its one end 20 mm in front of it. The line is parallel to and 20 mm above the HP.

[7M + 8M]

3. A line PQ 75 mm long has its end P in the VP and end Q in the HP. The line is inclined at 30^0 to HP and 60^0 to VP. Draw its projections and traces.

[15M]

4. A mirror 60 mm x 80 mm is inclined to the wall at such an angle that its front view is square of 60 mm side. Find the inclination with the wall.

[15M]

5. Draw the projections of a pentagonal prism 20 mm side of base and axis 45mm long resting on a corner such that the two edges passing through it make equal inclinations with HP and its base is inclined at 60 degrees to HP.

[15M]

6. A square pyramid 60 mm high, side of square base 25 mm rests on one of its base edges on HP and then it is tilted about this edge until the axis makes an angle of 30 degrees with HP. Draw the front and top views.

[15M]

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7.   Draw all the three principal views to the figure given below. All dimensions are in mm

[15M]
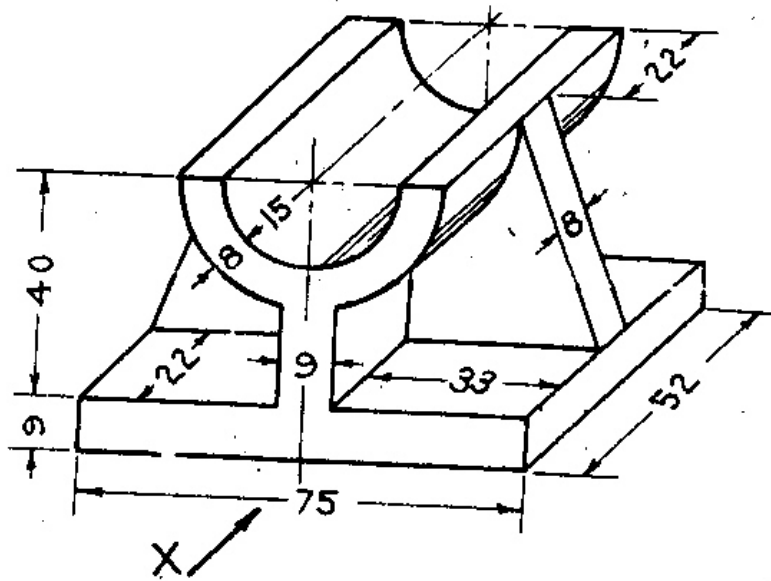
8.   A square pyramid of 40 mm side and height 50mm rests centrally on a square block of 60 mm edges and 20 mm thick. Draw the isometric projections of the composite solid with the edges of the two blocks equally inclined to each other.

[15M]

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Set No - 2

I B.Tech II Semester Regular Examinations June - 2012
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Biotechnology)
Time: 3 hours   **Max. Marks : 75**

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

1. A drawing is prepared to such a scale that an actual distance of 4 metre is represented by a line of 32 mm long. What is the R.F? Construct a diagonal scale long enough to read upto 25 metre and mark on the scale the distances 17 metre and 11 metre.

    [15M]

2. Draw the projections of 50 mm long straight line in the following positions:
    (i) Lies in both the H.P and the V.P
    (ii) Inclined at 45^0 to the H.P and its one end 15 mm above HP and 50 mm in front of the V.P.
    (iii) Perpendicular to the VP, 25 mm above the HP and one end in VP.
    (iv) Parallel and 20 mm in front of profile plane
    (v) Inclined at 30^0 to VP and parallel to profile plane

    [3M + 3M + 3M + 3M + 3M]

3. The front view of a line AB measuring 125 mm long is 75 mm and its top view is 100 mm long. Its end B is 30 mm from the both the planes. Draw the projections and find its inclinations with the reference planes.

    [15M]

4. Draw the projections of a regular hexagon of side 30mm which is resting on an edge in VP and inclined at 30^0 to HP. The plane is inclined at 45^0 to VP.

    [15M]

5. A pentagonal prism with side of base 30 mm and length of the axis 65 mm rests on one of its rectangular faces on VP. The axis of the prism is perpendicular to profile plane. Draw the projections.

    [15M]

6. Draw the projections of a cone, base 60 mm diameter and axis 90 mm long, resting on the VP such that on one of its generators parallel to the HP and perpendicular to VP.
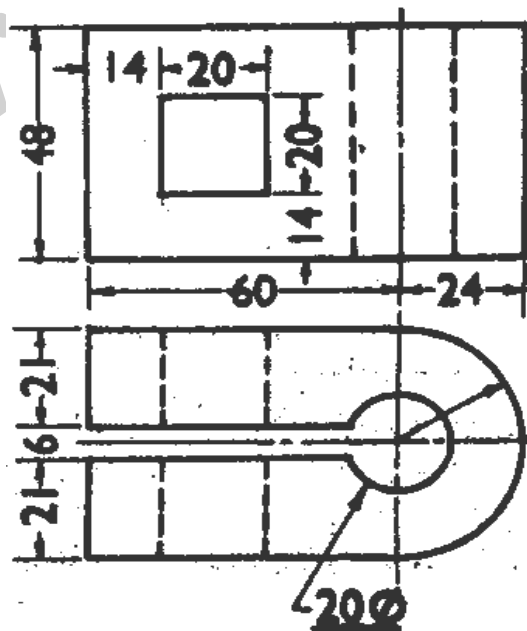
    [15M]

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7.   Draw all the three principal views to the figure given below. All dimensions are in mm.

[15M]
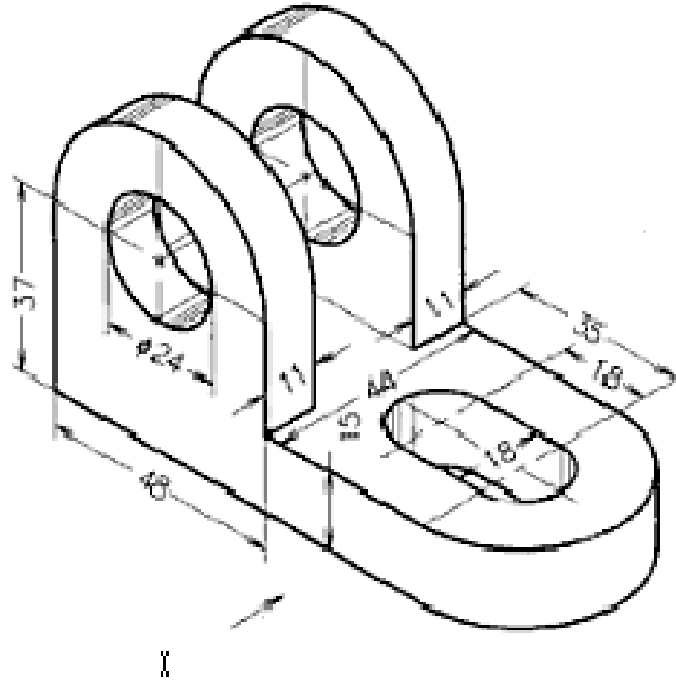
8.   Draw the isometric view of the object shown below. All the dimensions are given in mm.

[15M]

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| Set No - 3 |

I B.Tech II Semester Regular Examinations June - 2012
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Biotechnology)

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

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

1. Construct a vernier scale when 1.5 cm represents 1.2 metre, to read upto 20 metre, and mark on the scale the lengths 15.65 m and 12.37 m.

[15M]

2.(a) A point 20 mm below XY line is the top view of three points, P, Q and R. P is 25 mm below HP. The point Q is 35 mm above HP and the point R is in HP. Draw the projections of three points and state their positions with the reference planes and the quadrants in which they lie.

(b) A straight line AB 60 mm long has its end A in both HP and VP. The straight line is inclined at 30^0 to HP and parallel to PP. Draw its projections.

[7M + 8M]

3. The front view of a line AB measures 55mm and is inclined at 45 degrees to reference line. The end A is 25mm above HP, the HT of the line is 10mm in front of VP the line is inclined at 30 degrees to HP. Draw the projection of the line and determine its true length, inclination with VP and locate its VT.

[15M]

4. Draw the projections of a circular lamina of 65mm diameter, when it is inclined at 30^0 to HP and 60^0 to VP. One end of a diameter touches HP, while its other end touches VP.

[15M]

5. A hexagonal prism of base 20 mm side and axis 50 mm long is placed with one of its base edges on VP such that the axis is inclined at 30 degrees to VP. Draw its projections.

[15M]

6. A hallow cylinder of outside diameter 80 mm, thickness of the wall equal to 15 mm and height 70 mm is resting on HP with its axis inclined at 40 degrees to VP and parallel to HP. Draw top and front views.

[15M]

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7.   Draw all three orthographic projections to the following isometric view. All dimensions are in mm.
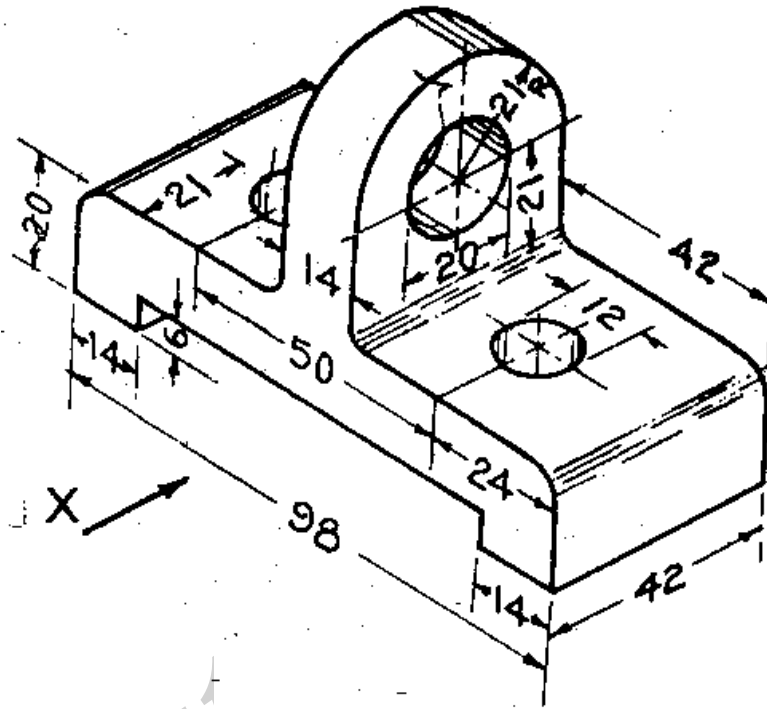
[15M]

8.   A sphere of 20mm diameter rests centrally on a cube 30mm side. The base of the cube in turn rests centrally on top of frustum of a cone of base diameter 40mm, top diameter 20mm and axis 60mm. Draw the isometric projections for the composite solid.

[15M]

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

I B.Tech II Semester Regular Examinations June - 2012
ENGINEERING DRAWING
(Common to Electronics & Communication Engineering, Biotechnology)

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

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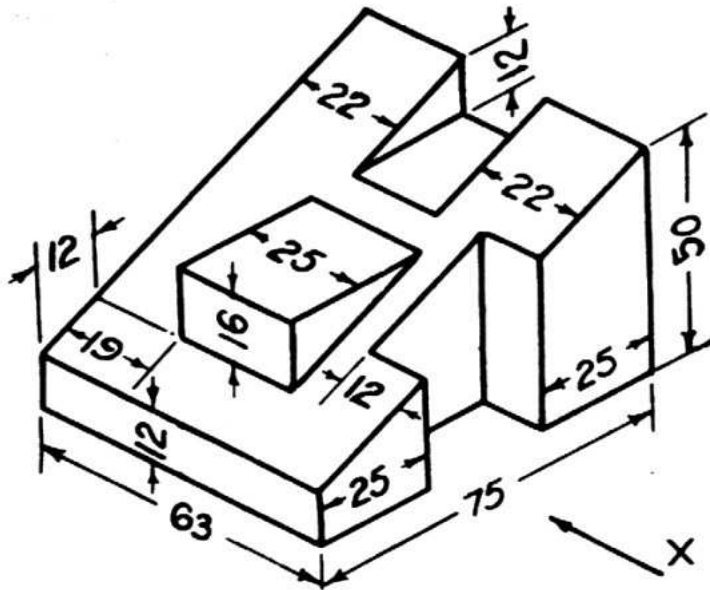**All Questions carry equal marks**
＊ ＊ ＊ ＊ ＊

1.   Construct a diagonal scale to read upto 0.1 mm and mark on it a distance of 17.3 mm and 68.7 mm. Take R.F 3:1

[15M]

2.(a)   The length of the top view of a line parallel to the V.P and inclined at 60 degrees to the H.P is 40 mm, one end of the line is 12 mm above the H.P and 25 mm in front of the V.P Draw the projections of the line and determine its true length.

(b)   A point P is 25 mm in front of the VP and 40 mm above the HP. Another point Q is 40 mm in front of the VP and 25 mm above HP. The distance measured between the projectors is 40 mm. Draw the projections and find the distance between P and Q.

[7M + 8M]

3.   A line AB 60 mm long has its end A in both HP and VP, and inclined at 30 degrees to HP and 45 degrees to VP. Draw its projections and traces.

[15M]

4.   A regular hexagonal lamina of side 25 mm is lying in such way that the one of its sides touches both the reference planes. If the lamina makes 60^0 with the VP, draw the projections of the lamina.

[15M]

5.   A cylindrical slab of 60 mm diameter has a 30 mm square hole axially cut in it. The cylindrical slab stands on HP with its axis making 60 degrees to HP. One of the faces of the square hole is equally inclined to VP. Draw the projections of the solid, if thickness is 20 mm.

[15M]

6.   A hexagonal pyramid has an altitude of 60 mm and side of base 30 mm. The pyramid rests with one of its sides of the base on HP such that the triangular face containing that side is perpendicular to HP. Draw the top and front views.

[15M]

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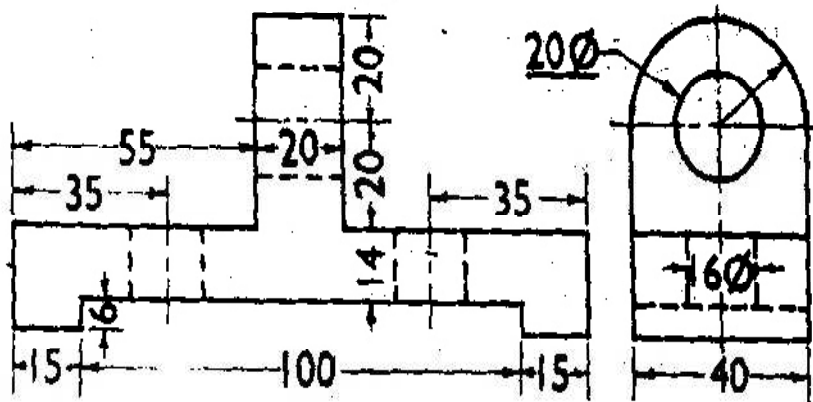
7.   Draw all three orthographic projections to the following isometric view.

[15M]

8.   Draw the isometric view of the object shown below. All the dimensions are in mm.

[15M]

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