I B.Tech II Semester Supplementary Examinations, August 2014
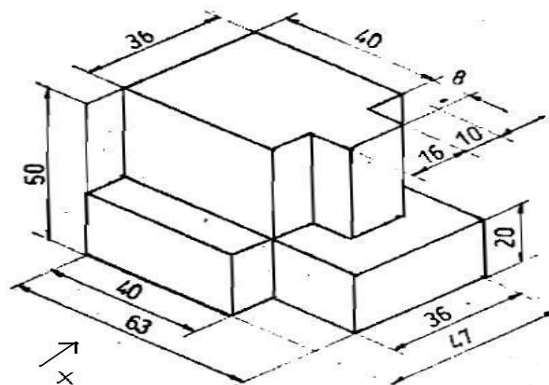**ENGINEERING DRAWING**
(Common to All Branches)

Time: 3 hours   Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1. The distance between two fixed points is 60mm. A point P moves such that the sum of its distance from two fixed points is always a constant and is equal to 80 mm. Draw the locus of P and determine the axes lengths.   [15]

2. (a) Draw the projections of a line 70 mm long when it is parallel to both the VP and HP. The line is 40 mm from both HP and VP.

   (b) Draw the projections of a line 60 mm long when it is perpendicular to VP and parallel to HP and 20 mm above HP. One end of the line is in VP.   [8+7]

3. The top view of a line is 80 mm long and inclined to XY at 45^0. One end is 20 mm above HP and 30 mm in front of VP. The other end is 55 mm above HP and is infront of VP. What is the true length of the line and its inclination with HP and VP? Also show its traces.   [15]

4. A square plane of side 45 mm has its surface parallel to the VP and perpendicular to the HP. Draw its projection when one of the sides is inclined at an angle of 30^0 to HP and the surface is inclined at 45^0 to VP.   [15]

5. A square prism of side 40mm and 90mm long is resting with one of its generator on the ground. Two of its rectangular faces are making equal angle with HP and axis perpendicular to VP. Draw its projections.   [15]

6. A right circular cone of a base diameter 50mm and height 60mm is placed such that one diameter AB of the base inclined at 45^0 to HP and another diameter CD of the base parallel to both HP and VP. Draw its projections of cone   [15]

7. Draw the front view looking from the direction of X, and top view, side views from the following figure.   [15]

8. A hemisphere of radius 30mm is placed centrally on a square slab of side 40mm and thickness 30mm so that the flat circular surface is on the top. Draw the isometric projection of the solids in the given position. [15]

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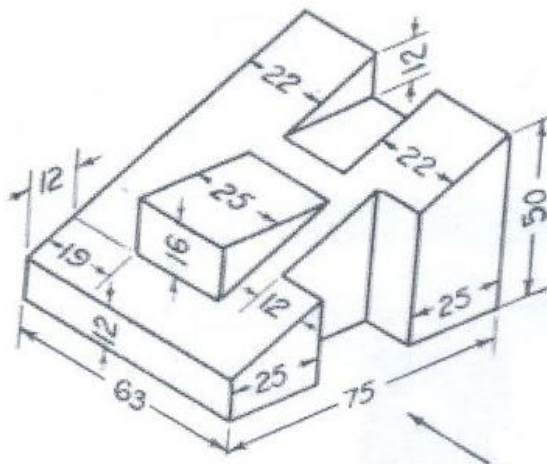Set No. 2

I B.Tech II Semester Supplementary Examinations, August 2014
ENGINEERING DRAWING
(Common to All Branches)

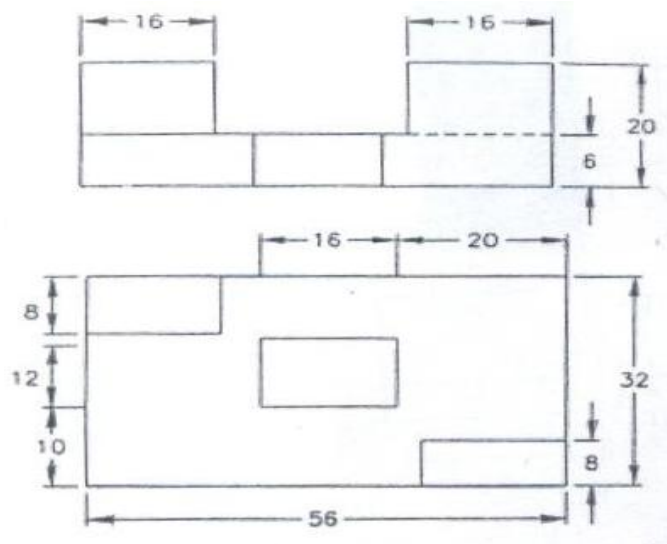Time: 3 hours   Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1. On a map, 100 cm x 120 cm represents an area of 2400 m^2. Draw a diagonal scale showing meters, decimeters, and centimeters and to measure up to 3 meters. Show a length of 1.64 meters on it.   [15]

2. (a) A line AB 50 mm long is in the VP and parallel to the profile plane. The end A is 20 mm above HP. Draw all the three principal views.

   (b) A point 30 mm above XY line is the front view of two points E and F. The top view of E is 40 mm behind the VP, and the top view of F is 50 mm in front of the VP. Draw the projections of the two points and state their positions with reference planes and quadrants in which they lie?   [8+7]

3. A straight line *AB* is 80 mm long. Its one end is in *VP* and the other end is in *HP*. Its top and front views measure 60 mm and 70 mm respectively. Draw its projections and determine its inclinations with the HP and the VP.   [15]

4. Draw a rhombus of diagonals 100 mm and 60 mm long with the longer diagonal horizontal. The figure is the top view of a square of 100 mm long diagonals, with a corner on the ground. Draw its front view and determine the angles made its surface with the ground.   [15]

5. A cube of 50mm side is resting on the HP with its vertical faces equally inclined to the VP. Draw its projections.   [15]

6. Draw the projections of a pentagonal pyramid having side of base 30 mm and length of axis 70 mm when it is resting with a triangular face in VP.   [15]

7. Draw the orthographic projections to the figure shown below.   [15]

1 of 2

8. Draw the isometric view of the block as shown in figure. [15]

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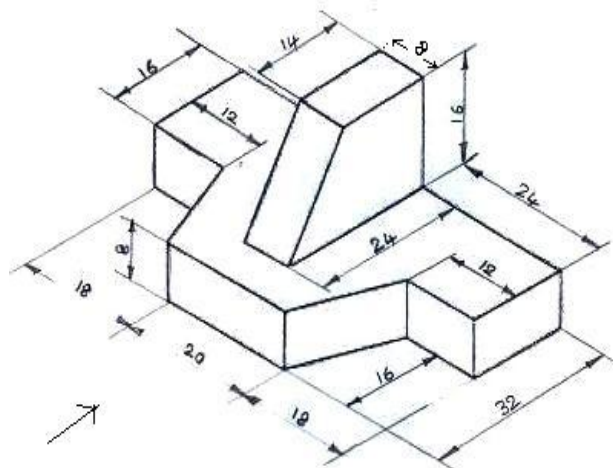
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Set No. 3

I B.Tech II Semester Supplementary Examinations, August 2014
ENGINEERING DRAWING
(Common to All Branches)

Time: 3 hours

Max Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1. The distance between two fixed points is 65 mm. A point P moves such that the sum of its distance from two fixed points is always a constant and is equal to 100 mm. Draw the locus of P and determine the axes lengths. [15]

2. (a) Draw the projections of a line 60 mm long when it is parallel to both the HP and VP. The line is 30 mm from both HP and VP.

   (b) Draw the projections of a line 70 mm long when it is perpendicular to VP and parallel to HP and 30 mm above HP. One end of the line is in VP. [8+7]

3. The front view of a line PQ 155 mm measures 135 mm and its top view measures 115 mm. The mid-point of the line PQ is 65 mm from both the planes. Draw the projection of the line PQ. [15]

4. A circular lamina of diameter 70 mm has the end A of the diameter AB in the HP and the end B in VP. Draw its projections when its surface is inclined at 60^0 to the HP and 30^0 to the VP. [15]

5. A square prism, side of base 35 mm and height 50 mm rests with its base on HP. Such that one of its rectangular faces is inclined at an angle of 30^0 to VP. Draw its projections. [15]

6. Draw the projections of a pentagonal pyramid side of base 30 mm and altitude 60 mm when it is resting on its base on the HP with an edge of base inclined at an angle of 30^0 to the VP. [15]

7. Draw orthographic projections to the following isometric view. [15]

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1 of 2

8. A sphere of radius 25mm is resting centrally on the top of a square block of side is 50mm and thickness is 15mm. Draw the isometric projection of the combination.

[15]

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I B.Tech II Semester Supplementary Examinations, August 2014
ENGINEERING DRAWING
(Common to All Branches)

Time: 3 hours   Max Marks: 75

Answer any FIVE Questions
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1. Construct a vernier scale to read distance correct to decameter on a map in which the actual distances are reduced in the ratio of 1:20000. The scale should be long enough to measure up to 4 km. Mark on the scale a length of 2.46 km and 3.28 km. [15]

2. A line PQ has end P 30 mm above HP and 30 mm infront of VP. End Q is 40 mm above HP and 50 mm infront of VP. The distance between the end projectors is 50 mm. Draw the projections of the line, find true length of the line and its inclination with HP and VP. [15]

3. The top view of a 75 mm long line CD measures 50 mm. The mid point of the line is 50 mm from VP and 75 mm from the HP. The point D is 30 mm from VP. Draw its projections and find its inclinations with the HP and VP. [15]

4. (a) Draw the projections of a regular hexagon as plane of 40 cm side, having one of its sides on the ground and its surface perpendicular to VP, making an angle of 30^0? with the ground.

   (b) A pentagonal lamina of side 25mm is resting on one of its sides on HP such that the surface parrallel is parallel to profile plane. [8+7]

5. A triangular prism, base 40 mm side and height 65 mm is resting on the ground with one of its rectangular faces such that the axis of the prism is perpendicular to the profile plane. Draw its projections. [15]

6. A hexagonal pyramid of base side 20 mm and axis 60 mm has a central hole of 30 mm dia along the axis to $1/3^{rd}$ the height of the pyramid. It is resting on its side on the H.P. and the axis making an angle 45^0 to the HP. Draw its projections. [15]

7. Draw orthographic projections to the following isometric view. [15]
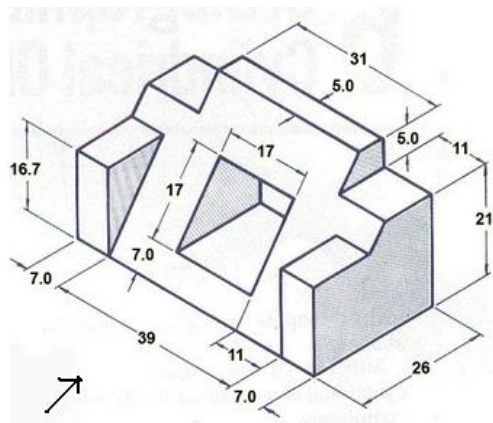
8. Draw the isometric view of the bracket as shown in figure. All the dimensions are in mm. [15]

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