

Code No: R05010107

R05**Set No. 2**

**I B.Tech Examinations, June 2011
ENGINEERING GRAPHICS**

Common to CE, ME, MECT, MEP, AE, AME, MMT

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. A vertical hexagonal prism of 25 mm side of base and axis 60 mm has one of its rectangular faces parallel to VP. A circular hole of 40 mm diameter is drilled through the prism such that the axis of the hole bisects the axis of the prism at right angle and is perpendicular to VP. Draw the development of the lateral surface of the prism showing the true shape of the hole in it. [16]
2. Draw an ellipse by Oblong method. The major and minor axes given as 150 mm and 90mm respectively. Draw normal and tangent at any point on the ellipse at a distance of 55mm from the geometrical center of the ellipse. [16]
3. A pentagonal lamina of 40 mm side lies on the ground. The corner, which is nearest to PP, is 15 mm behind it and an edge containing that corner is making 45° with PP. The station point is 40 mm in front of PP, 50 mm above the ground plane and lies in a central plane, which is at a distance of 70 mm to the left of the corner nearest to the PP. Draw the perspective view of lamina. [16]
4. Three lines OA, OB and OC are respectively 25 mm, 45 mm 65 mm long, each making 120 degrees angles with the other two and the shortest line being vertical. The figure is the top view of the three rods OA, OB and OC whose ends A, B and C are on the ground, while O is 100 mm above it. Draw the front view and determine the length of each rod and its inclination with the ground. [16]
5. Draw the elevation, plan and side view of the picture shown in the figure3. All the dimensions in the figure are in mm. [16]

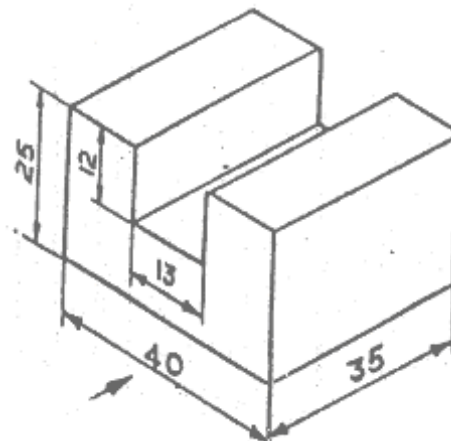


Figure 3

6. A paperweight consists of a frustum of a square pyramid, side of base 70 mm at the bottom, 40 mm at the top and 20 mm height. It is surmounted by a cylinder

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of 30 mm diameter with spherical knob of 40 mm diameter at the top such that the center of the sphere is at a height of 25 mm from the top of the frustum. Draw the isometric projection of the assembly. [16]

7. Construct a diagonal scale to read kilometers, hectameters and decameters and long enough to measure up to 6 kilometers, When a line of length 1cm on the map represents a distance of 0.5 kilometers. Calculate the R.F and indicate a distance of 2.45 kilometers on the scale. [16]
8. A cone of base diameter 60 mm and altitude 75mm lies on the HP on one of its generators. The plan of the axis is inclined at 45° to the VP. Draw its projections. [16]

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7. Draw an ellipse by Oblong method. The major and minor axes given as 150 mm and 90mm respectively. Draw normal and tangent at any point on the ellipse at a distance of 55mm from the geometrical center of the ellipse. [16]
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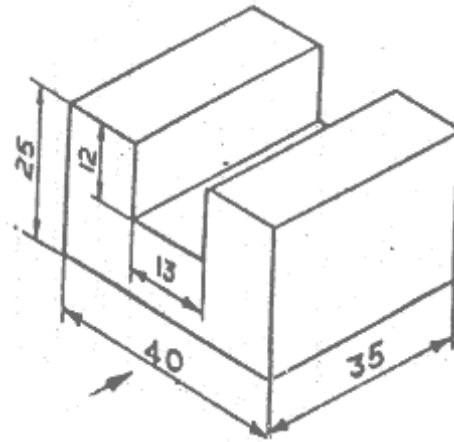


Figure 3

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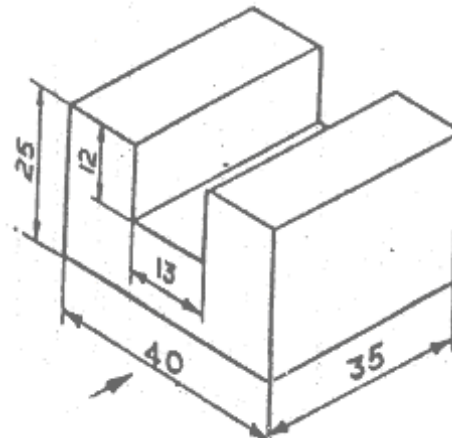


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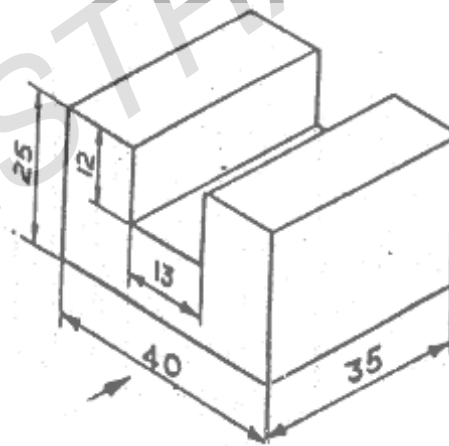


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