

Code No: 121AH

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B.Tech I Year Examinations, August - 2018

ENGINEERING DRAWING

(Common to CSE, MIE, PTM)

Time: 3 hours

Max Marks: 75

Answer any five questions

All questions carry equal marks

1. Draw the curve traced out by an end of a thin wire unwound from a regular hexagon of side 15 mm, the wire being kept tight. Draw a tangent and normal to the curve at a point 80 mm from the center of the hexagon. [15]
OR
2. An area of 50 sq.km of a field is represented by an area of 150 sq.cm on a map. Construct a diagonal scale to read kilometers, hectometers and decameters. The maximum length to be indicated on the scale is 10 km. Show a distance of 6.48 km on the scale. [15]
3. The end A of a line AB is in the HP and 15 mm in front of the VP. The end B is 50 mm behind the VP and 40 mm below the HP. The distance between the end projectors is 50 mm. Draw the projections of AB and determine its true length and true inclinations with the two planes. [15]
OR
4. Draw the projections of a regular pentagon of 40 mm side having its surface inclined at 30° to V.P and side on which it rest on V.P makes an angle of 60° with H.P. [15]
5. Draw the projections of a cone with base 45 mm diameter and axis 60 mm long when it is resting on the ground on a point of its base circle with the axis making an angle of 30° with HP and 45° with VP. [15]
OR
6. A square prism of 32 mm side and 100 mm height is lying on its base on HP such that the edges of the base are equally inclined to VP. The prism is cut by a section plane passing through the mid-point of the axis such that the true shape of section is a rhombus of diagonals of 102 mm and 42 mm. Determine the inclination of section plane with HP. [15]
7. A cone having diameter of base 75 mm axis 75 long is resting on its base on HP. It is cut by a section plane perpendicular to VP and inclined at 40° to HP and cutting the axis at a point 40 mm from base. Draw the development of the part of the cone containing the apex. [15]
OR
8. A cylinder of 75 mm diameter standing on its base on HP is completely penetrated by another cylinder of 55 mm diameter with their axes intersecting at right angle. Draw the projections showing the lines of intersection, assuming that the axis of the smaller cylinder is parallel to VP. [15]

9. By using the following views as shown in figure 1, draw the isometric view. All dimensions are in mm. Use a scale of 1:20. [15]

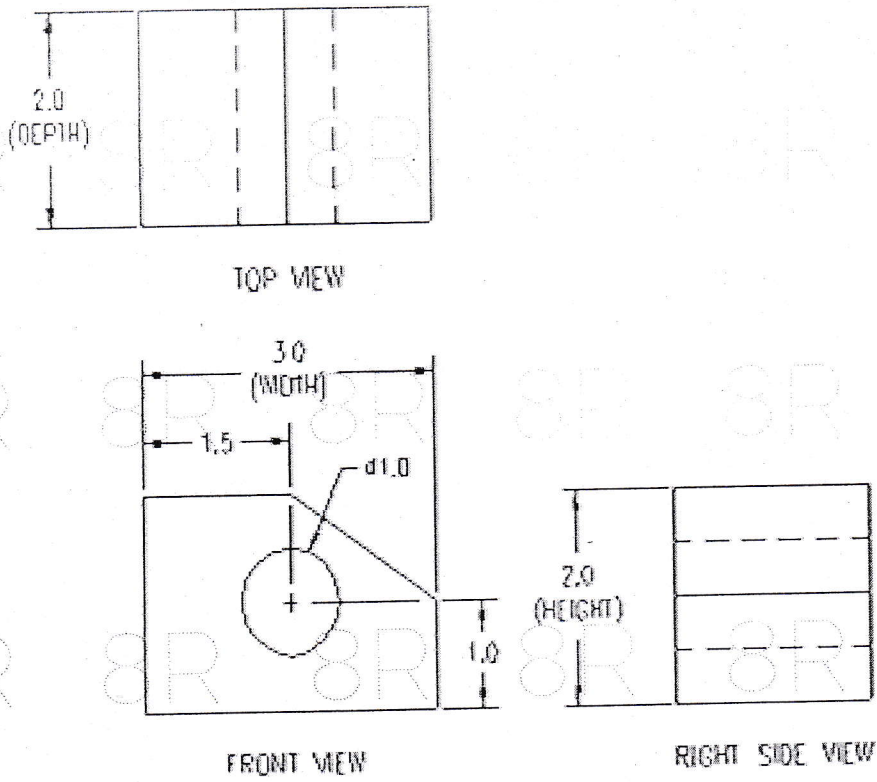


Figure: 1
OR

10. For the following isometric view shown in figure 2, draw a) Front view by seeing from 60 mm width side b) top view c) left side view. All dimensions are in mm. [15]

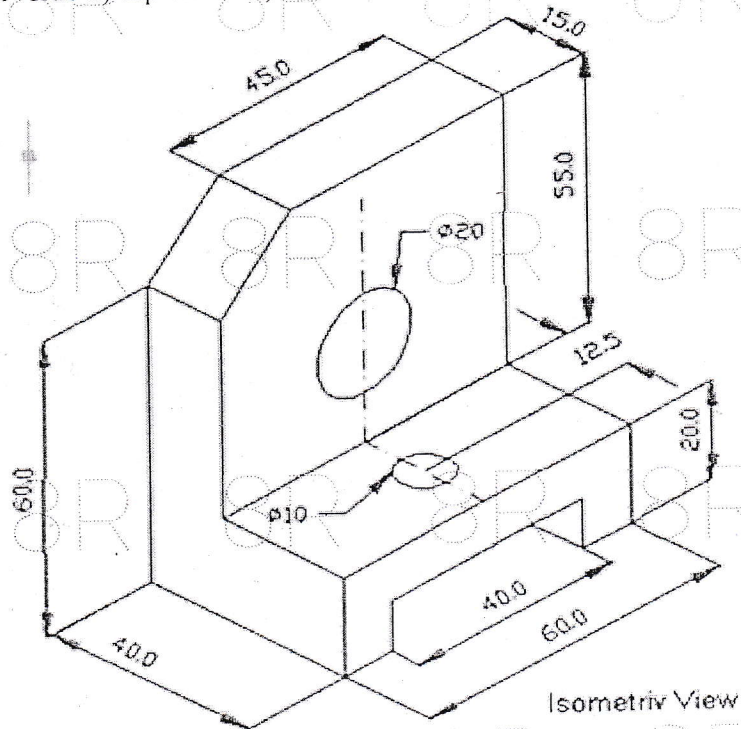


Figure: 2