Code No: 111AG

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year Examinations, June – 2015
ENGINEERING DRAWING
(Common to ECE, EIE)

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

Answer any five questions
All questions carry equal marks

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1.a) Draw a rectangular hyperbola whose directices are 40 mm apart and locate its foci and vertices.

b) Construct a scale of RF 1:40 to read meters and decimeters and long enough to measure up to 6 m. Mark on it distances of 4.7 m and 3.2 m. [7+8]

OR

2.a) Draw a hyperbola when the eccentricity is 3/2 and the distance between focus and directrix is 55 mm. Also draw tangent and normal to the curve at a point 40 mm from focus.

b) The actual length of 500 m is represented by a line of 15 cm on a drawing. Construct a vernier scale to read upto 600 m. Mark on the scale a length of 549 m. [8+7]

3. A line PQ, inclined at 45^0 to the V.P., has a 60 mm long front view. The end P is 10 mm from both the principal planes while the end Q is 45 mm above the H.P. Draw the projections of the line and determine its true length and inclinations with the principal planes. Also, locate its traces. [15]

OR

4. A hexagonal prism having base with a 25 mm side and 70 mm long axis, rests on a rectangular face on the H.P., such that the axis is parallel to and 60 mm in front of the V.P. Draw its front, top and side views. [15]

5. A hexagonal prism, having base with a 30 mm side and a 70 mm long axis, is resting on one of the edges of its base in the H.P. such that this edge makes 60^0 with the V.P. and the base makes an angle of 60^0 with the H.P. Draw its projections. [15]

OR

6. A triangular prism, having a base with a 50 mm side and a 75 mm long axis, is lying on one of its rectangular faces in H.P. with its axis perpendicular to the V.P. It is cut by a horizontal section plane such that the true shape of the section is a rectangle with 35 mm and 75 mm sides. Draw its front view and sectional top view. [15]

7. A cone of base diameter 70 mm and height 100 mm rests on the HP on its base and is penetrated by a horizontal cylinder of diameter 45 mm. The axis of cylinder is 9 mm away from the axis of the cone and at a distance 30 mm above the base of the cone. Draw the projections of the solids showing the curve of intersection between the solids. [15]

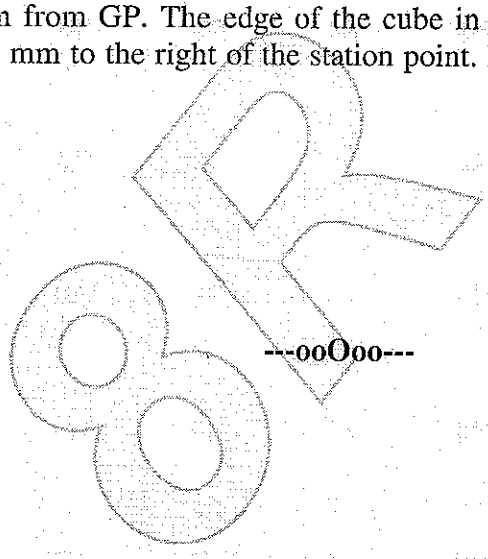
OR

8. Develop the lateral surface of a frustum of cone of height 60 mm, base circle diameter 60 mm and top surface diameter 30 mm. [15]

9. A paper weight consists of three portions. The bottom-most portion is a cylinder with a 80 mm diameter and 25 mm height. On it is situated the middle portion which is the frustum of a cone with a 80 mm base diameter, 50 mm top diameter and 40 mm height. The topmost portion is hemi-sphere with a 30 mm radius. Draw the isometric projection of the section. [15]

OR

10. A cube on 5 mm edge lies with a face on the ground and an edge on the picture plane. All the vertical faces are equally inclined to PP. The SP is 80 mm from PP and 60 mm from GP. The edge of the cube in contact with the picture plane is situated 10 mm to the right of the station point. Draw the perspective view of the cube. [15]



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