R18

Code No: 151AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech I Year I Semester Examinations, September - 2023
ENGINEERING GRAPHICS
(Common to ECE, AI&DS, AI&ML)

Time: 3 Hours **Max Marks: 75**

Answer any five questions
All questions carry equal marks

- - -

1. A fixed point is 80 mm from a fixed straight line. Draw the locus of a point P moving in such a way that its distance from the fixed straight line is twice its distance from the fixed point. Name the curve. [15]

OR

2. A rectangular plot of area 9 hectares is represented on a map by a similar rectangle of 25 sq.cm. Calculate R.F. Draw a diagonal scale to read upto a length of one kilometer and show on it a length of 428m. [15]

3. A 90 mm long line PQ, is inclined at 45^0 to the H.P. and 30^0 to the V.P. The end P is 20 mm above the H.P. and in the V.P. Draw its projections. [15]

OR

4. Draw the projections of a rhombus of diagonals 120 mm and 60 mm long, the smaller diagonal of which is parallel to both the principal planes, while the other is inclined at 30^0 to the HP. [15]

5. A square pyramid of 35 mm side and 60 mm height rests on one of its triangular faces on the H.P, such that the base edge is inclined at 40^0 to V.P. Draw the projections of pyramid. When the apex is nearer to the viewer? [15]

OR

6. A cylinder of 40 mm diameter, 60 mm height and having its axis vertical, is cut by a section plane, perpendicular to the V.P., inclined at 45^0 to the H.P. and intersecting the axis 32 mm above the base. Draw its front view, sectional top view, and true shape of the section. [15]

7. 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]

OR

8. 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]

9. Draw the isometric view of given casting for the following figure 1. All dimensions are in mm. [15]

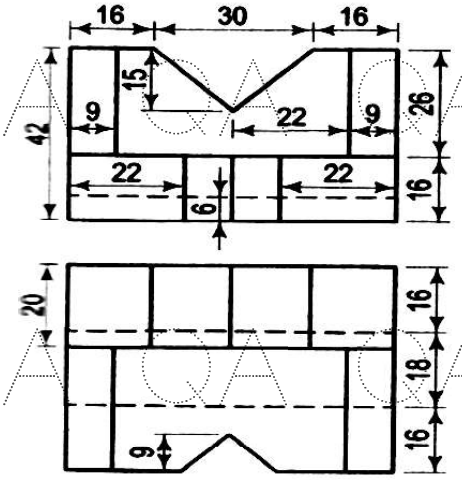

Figure 1

OR

10. Draw the front view, top view, and right side view for the part shown in following figure 2. All dimensions are in mm. [15]

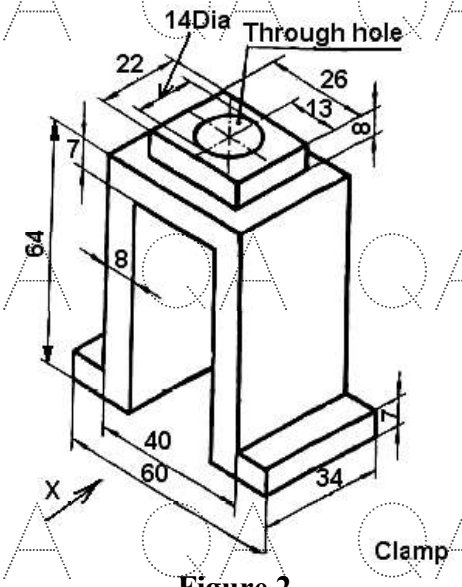

Figure 2

--ooOoo--