

R15

Code No: 121AG

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech I Year Examinations, January/February - 2024

ENGINEERING DRAWING
(Electronics and Communication Engineering)

Time: 3 Hours

Max Marks: 75

Answer any five questions
All questions carry equal marks

1. A point F is 50 mm from a line AB . a point P is moving in a plane such that the ratio of its distances from F and line AB remains constant and equals to $2/3$, draw locus of point P . [15]

OR

- 2.a) Draw involute of a pentagon of side 25 mm.
b) Construct a scale of 1:40 to read metres, decimetres and centimetres and long enough to measure up to 6 m. Mark a distance of 4.76 m on it. [8+7]

3. A line AB , 80 mm long, makes an angle of 30° with the VP , and lies in a plane perpendicular to both the HP and VP . Its end A is in the HP , and the end B is in the VP . Draw its projections and show its traces. [15]

OR

4. A semi-circular lamina of 64mm diameter has its straight edge in VP and inclined at an angle of 45° to HP . The surface of the lamina makes an angle of 30° with VP . Draw the projections. [15]

5. Draw the projection of a pentagonal prism, base 20 mm side and axis 50mm long, resting on one of its rectangular faces on the ground with the axis inclined at 30° to the VP . [15]

OR

6. A cylinder, 60 mm diameter and 80 mm long, has its axis parallel to the $H.P.$ and inclined at 30° to $V.P.$ It is cut by a vertical section plane in such a way that the true shape of the section is an ellipse having the major axis 70 mm long. Draw its sectional front view and true shape of the section. [15]

7. A cylinder of diameter 50 mm and height 75 mm is resting on the ground on its flat end. It is cut by a sectional plane inclined at 30° to the axis of the cylinder and passing through a point on the axis at height of 50 mm from the base. Draw the lateral surface of the bottom part. [15]

OR

8. A cone of base diameter 80 mm and its axis 100 mm is resting on its base on HP . It is completely penetrated by a cylinder of base diameter of 40 mm. The axes of the solids intersect each other at right angles, 30 mm above the base of the cone. Draw the projections of the combination and curves of intersection. [15]

