

ANURAG Engineering College
(An Autonomous Institution)

I B.Tech. II Semester Supplementary Examinations, June/July – 2024

ENGINEERING GRAPHICS
(COMMON TO CIVIL, EEE & MECH)

Time: 3 Hours

Max. Marks: 75

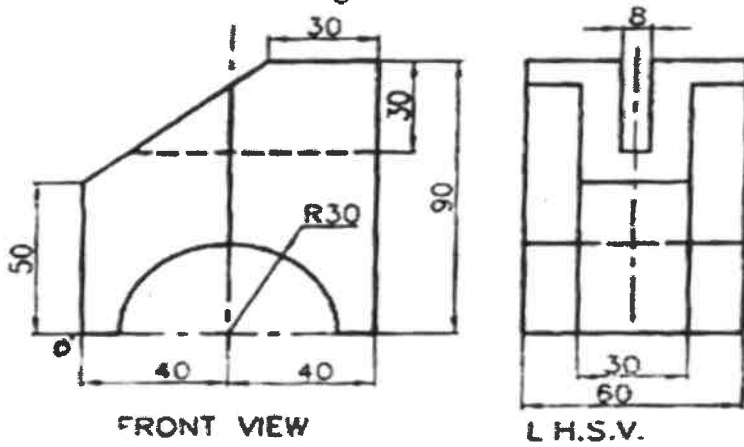
Answer all questions, each question carries equal marks.

(5 X 15M = 75M)

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|-----------|---|-----|----|-----|
| 1. A) | Draw an Epicycloid having a generating circle of 50mm and a directing curve of radius 100mm. Also draw a normal and a tangent at any point M on the curve. | CO1 | L2 | 15M |
| OR | | | | |
| B) | Construct a Hyperbola when the distance between focus and directrix is 70mm and the eccentricity is 4/3. Draw a tangent to the curve at a point 20mm from the focus and its normal. | CO1 | L2 | 15M |
| 2. A) | The distance between the end Projectors of a line AB is 40mm. The end point is 15mm above HP and 20mm in front of V.P. the Line is inclined at 30° to the H.P. Draw its Projections if the true length of the line is 80mm. Find its Inclination with the V.P. Take the end point B in the 1 st Quadrant. | CO2 | L2 | 15M |
| OR | | | | |
| B) | A Pentagon of side 30mm rests on the ground on one of its corners with the sides containing the corner being equally inclined to the ground. The side opposite to the corner on which it rests is inclined at 30° to the V.P and is parallel to the H.P. The Surface of the pentagon makes 50° with the ground. Draw the top and front views of the pentagon. | CO2 | L2 | 15M |
| 3. A) | A Pentagonal pyramid, base 25 mm side and axis 50 mm long has one of triangular faces in the V.P. and the edge of the base contained by that face makes an angle of 30 degrees with the H.P. Draw its projections. | CO3 | L3 | 15M |
| OR | | | | |
| B) | A cone diameter of base 50 mm and axis 50 mm long is resting on its base on the H.P. It is cut by a section plane perpendicular to the V.P., Inclined at 75° to the H.P and passing through the apex. Draw its front view, sectional top view, and true shape of the section | CO3 | L3 | 15M |
| 4. A) | A cylinder of diameter 40 mm and height 50 mm is resting vertically on one of its ends on the HP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a point 30 mm from the base. Draw the development of the lateral surface of the lower portion of the truncated cylinder. | CO4 | L3 | 15M |
| OR | | | | |
| B) | A cone of diameter 60 mm and height 80 mm is cut by a section plane such that the plane passes through the mid-point of the axis and tangential to the base circle. Draw the development of the lateral surface of the bottom portion of the cone. | CO4 | L2 | 15M |

5. A) Figure shows two views of an object. Draw the isometric view of the object. All dimensions in the figure are in mm.

CO5 L2 15M



OR

B) Draw the front view, top view and side view of the object whose isometric view is shown in the Figure below (All dimensions are in mm)

CO5 L2 15M

