

ANURAG Engineering College
(An Autonomous Institution)

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

ENGINEERING GRAPHICS
(COMMON TO ECE & CSE)

Time: 3 Hours

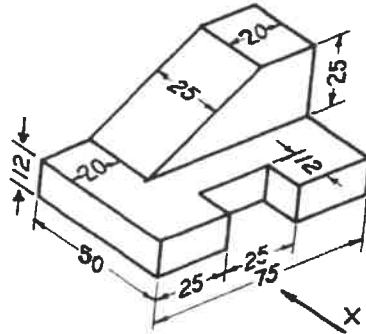
Max. Marks: 75

Answer all questions, each question carries equal marks.

(5 x 15M = 75M)

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|--|-----|----|-----|
| <p>1. A) Draw an epicycloid having a generating circle of diameter 50 mm and a directing curve of radius 100 mm. Also draw a normal and a tangent at any point M on the curve.</p> | CO1 | L3 | 15M |
| OR | | | |
| <p>B) A circle of 50 mm diameter rolls along a straight line without slipping. Draw the locus of a point P on the circumference of the circle for one complete revolution. Name the curve. Draw a tangent and normal to the curve at a point on it 40 mm from the line</p> | CO1 | L3 | 15M |
| OR | | | |
| <p>2. A) A point 30 mm above xy line is the top view of two points P and Q. The front view of P is 45 mm above the HP while that of the point Q is 35 mm below the HP. Draw the projections of the points and state their positions with reference to the principal planes and their quadrants in which they lie.</p> | CO2 | L3 | 15M |
| OR | | | |
| <p>B) Draw the projections of a line AB, 90 mm long, its midpoint M being 50 mm above the HP and 40 mm in front of the VP. The end A is 20 mm above the HP and 10 mm in front of the VP. Show the traces and inclinations of the line with the HP and VP.</p> | CO2 | L3 | 15M |
| OR | | | |
| <p>3. A) 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.</p> | CO3 | L3 | 15M |
| OR | | | |
| <p>B) Draw the projections of a cone, base 75 mm diameter and axis 100 mm long, lying on the H.P. on one of its generators with the axis parallel to the V.P.</p> | CO3 | L3 | 15M |
| OR | | | |
| <p>4. A) A hexagonal prism of base side 20 mm and height 45mm is resting on one of its ends on the HP with two of its lateral faces parallel to the VP. It is cut by a plane perpendicular to the VP and inclined at 30° to the HP. The plane meets the axis at a distance of 20 mm above the base. Draw the development of the lateral surfaces of the lower portion of the prism</p> | CO4 | L3 | 15M |
| OR | | | |
| <p>B) 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.</p> | CO4 | L3 | 15M |

5. A) Draw the orthographic view's (i. e. front view, top view & side view) of the following figure. Use first angle projection method. CO5 L3 15M



OR

- B) Draw i) Front View ii) Top View iii) Side View for the below figure (All dimensions are in mm). CO5 L3 15M

