

Code: 23ES1104

I B.Tech - I Semester – Supplementary Examinations – JULY 2024**ENGINEERING GRAPHICS**
(Common for CE, ME, IT, AIML, DS)

Duration: 3 hours

Max. Marks: 70

Note: 1. This question paper contains 5 essay questions with an internal choice from each unit. Each question carries 14 marks.
2. All parts of Question must be answered in one place.

UNIT – I

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| 1. | A fixed point is 75 mm from a fixed straight line. Draw the locus of a point P moving such a way that its distance from the fixed straight line is twice its distance from the fixed point. Name the curve and also draw normal and tangent to the curve anywhere on it. Mention the Eccentricity. | 14 M |
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OR

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| 2. | a) Inscribe a regular polygon of five number of sides, in a given circle. | 7 M |
| | b) To construct a parabola, when the distance of the Focus from the directrix is 50 mm. | 7 M |

UNIT – II

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| 3. | The top view of a 75 mm long line CD measures 50 mm. C is 50 mm in front of the V.P. and 15 mm below the H.P. D is 15 mm in front of the V.P. and is above the H.P. Draw the front view of CD and find its inclinations with the H.P. and the V.P. | 14 M |
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OR

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| 4. | a) | Two points A and B are in the H.P. The point A is 30 mm in front of the V.P., while B is behind the V.P. the distance between their projectors is 75 mm and the line joining their top views makes an angle of 45 degrees with XY. Find the distance of the point B from the V.P. | 7 M |
| | b) | Point P is 15 mm above the H.P. and 20 mm in front of the V.P. Another point Q is 25 mm behind the V.P and 40 mm below the H.P. Draw the projections of P and Q keeping the distances between their projectors equal to 90 mm. Draw straight lines joining their top and front views. | 7 M |

UNIT-III

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| 5. | A hexagonal pyramid, base 25 mm side and axis 50 mm long, has an edge of its base on the ground. Its axis is inclined at 30° to the ground and parallel to the V.P. Draw its projections. | 14 M |
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OR

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| 6. | Draw the projections of a regular hexagon of 25 mm side, having one of its sides in the H.P. and inclined at 60° to the V.P., and its surface making an angle of 45° with the H.P. | 14 M |
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UNIT – IV

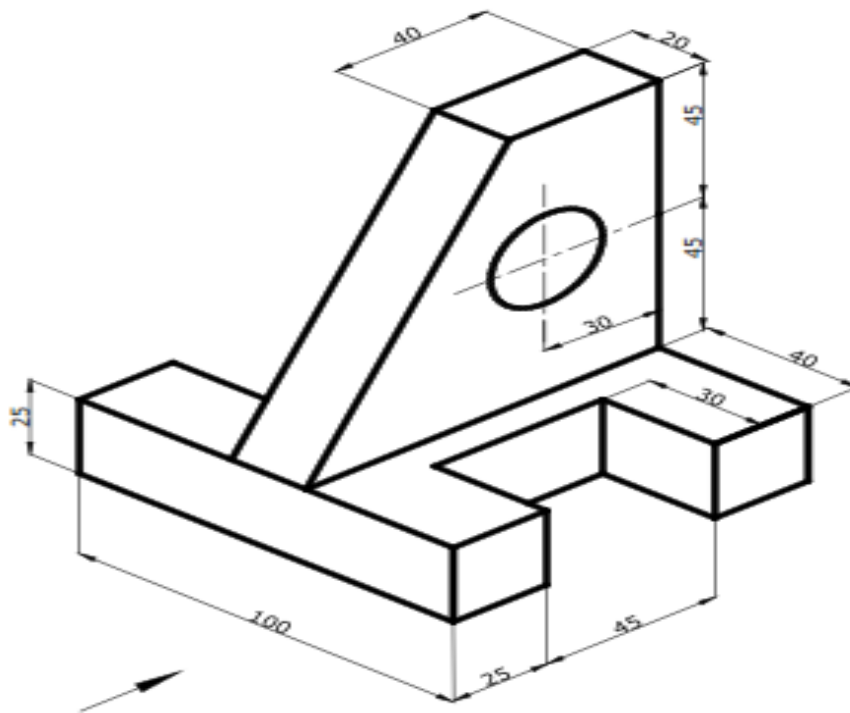
| | | |
|----|--|------|
| 7. | A regular hexagonal pyramid of side of base 30 mm and height 60 mm is resting vertically on its base on HP such that two of the sides of the base are perpendicular to VP. It is cut by a plane inclined at 40° to HP and perpendicular to VP. The cutting plane bisects the axis of the pyramid. Draw the sectional top view and true shape. | 14 M |
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OR

8. 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. 14 M

UNIT – V

9. Draw the (i) Front view (ii) Top view and (iii) Side view for the following figure. 14 M



OR

10. Draw the (i) Front view (ii) Top view and (iii) Side view for the following figure. 14 M

