| Sub code:R25ES07 | | R25 |
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# AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY
## (UGC - Autonomous)

(Approved by AICTE, Recg. by Govt. of T.G & Affiliated to JNTU, Hyderabad) NAAC "A" Accredited Institute

## B.Tech I Year I Semester Regular Examinations, December-2025/January-2026

## COMPUTER AIDED ENGINEERING DRAWING

**(Common to CSE)**

**Time: 3hours** **Max. Marks: 60**

**Note:** This question paper consists of ten questions from 5 Units. Answer any one full question from each unit. Each question carries 12 marks and may have a, b as sub questions.

**(5x12=60 Marks)**

| Q. No. | Questions | BTL | Marks |
|---|---|---|---|
| 1. | Draw an ellipse when the distance between its focus and directrix is 70mm and eccentricity is 3/4.Also draw the tangent and normal at a point distance 70mm from the directrix? | L3 | 12M |
| | **OR** | | |
| 2. | Construct a diagonal scale showing kilometers, hectometers and decameters in which a 2 cm long line represents 1 km and the scale is long enough to measure up to 7 km. Find the R.F. and mark a distance 4.53km on it. | L3 | 12M |
| | | | |
| 3. | A 70mm long line PQ has its end P 15mm from both H.P. and V.P. The other end Q is 40mm above H.P. and 50mm in front of V.P. Draw the projections of the line and determine the inclinations with H.P. and V.P. | L3 | 12M |
| | **OR** | | |
| 4. | Draw the projections of a Rectangle 30mm x 50 mm sides resting on HP on one of its small side which is $30^0$ inclined to VP, while the surface of the plane makes $45^0$ inclination with HP. | L3 | 12M |
| 5. | Draw the front view, sectional top view and true shape of section of a hexagonal pyramid of base side 20 mm and axis 45 mm resting on its base on H.P with an edge of the base perpendicular to V.P. It is cut by a section plane perpendicular to V.P, inclined at $35^0$ to H.P and cuts the axis at a point 15mm from apex. | L3 | 12M |
| | **OR** | | |
| 6. | Draw the front view, sectional top view and true shape of section of a cylinder of base diameter 30 mm and axis 55 mm resting on its base on H.P. It is cut by a section plane perpendicular to V.P, inclined at $35^0$ to H.P and cuts the axis at a point 20mm from upper base. | L3 | 12M |
| 7. | Draw the development of lateral surface of the remaining portion of the cone of base 50 mm diameter and axis 60 mm long. The cone rests with its base on HP. A section plane perpendicular to VP and inclined at $45^0$ to HP bisects the axis of the cone. | L3 | 12M |
| | **OR** | | |
| 8. | Develop the lateral surface of the truncated prism of a regular hexagonal prism side of base 30 mm and height 60 mm is resting vertically on its base on HP, such that two of its sides of the base are perpendicular to VP. It is cut by a plane inclined at $40^0$ to HP and perpendicular to VP. The cutting plane bisects the axis of the pyramid. | L3 | 12M |

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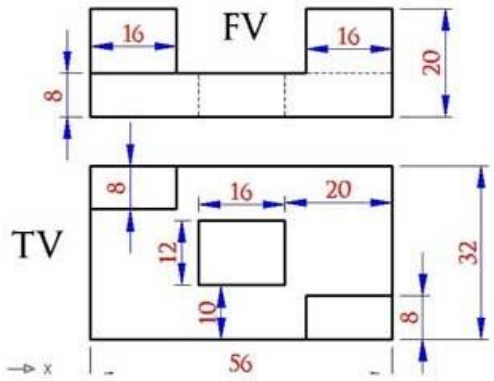
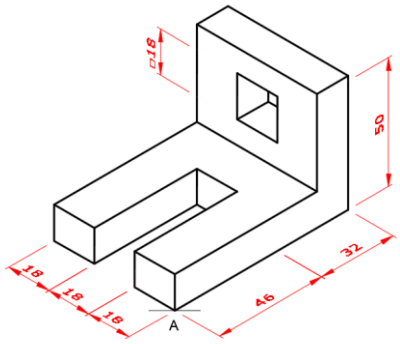
|---|---|---|---|
| 9. | Construct the isometric view of orthographic views that are given in figure below. All dimensions are in mm only.<br>  | L3 | 12M |
| | **OR** | | |
| 10. | Draw the front view, top view and side view of the part shown in figure below. All dimensions are in mm only.<br>  | L3 | 12M |

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