Name :
Roll No:

MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM – 686 666
(Government Aided Autonomous Institution)
DEPARTMENT OF MECHANICAL ENGINEERING
SECOND SESSIONAL EXAMINATION NOV. 2025
S1 Mechanical A&B-Batch
B24ME1TO1 ENGINEERING GRAPHICS

Time – $1\frac{1}{2}$ Hours **Max: 40 Marks**

Answer All Questions

1. A square prism having a base of 40 mm side and 60 mm long axis rests on its base on the HP such that one of the vertical faces makes an angle of 30 degree with the VP. A section plane perpendicular to the VP, inclined at 45 degree to the HP and passing through the axis at a point 20 mm from its top end, cuts the prism. Draw the front view, sectional top view and true shape of the section. [CO3] 10 Marks
2. Draw the top and front view of a cylinder cut by a section plane in such a manner that the true shape of the section is an ellipse of 40 mm minor axis and 80 mm major axis. Find the slope of the cutting plane. Take the smallest generator to be 20 mm. [CO3] 10 Marks
3. A cone of base diameter 60 mm and height 90mm rests on HP on its base. Draw the shortest path between two points R and S, where R is a point on the base circle and S is point diametrically opposite on the base circle. Find out the shortest path and trace the path in the plan. [CO3] 10 Marks
4. Draw the isometric view of a pentagonal prism, 25 mm side of base and 60 mm height, which is resting on a rectangular face on HP. [CO4] 10 Marks

VISION

Mentoring to Ensure Excellence

MISSION

- To facilitate comprehensive and integrated development of students by providing quality education that encourages sustainable practices
- To mould disciplined and socially committed engineers capable of assuming professional leadership upholding national integrity