

Reg No : Name :

MAR ATHANASIOUS COLLEGE OF ENGINEERING, KOTHAMANGALAM

(Govt. Aided Autonomous Institution)

First Semester B.Tech. Degree (SAY) Examination, February 2026

Course Code: B24ES1T03C

Course Name: Graphics for Civil Engineers

Max. Marks: 100

Duration:3 Hours

Answer any one full question from each module. Each question carries 20 marks.

Module 1

1. A building with a sloped roof has its sloping edge represented by line AB. The front view of line AB is 50° inclined to reference line and is 55 mm long while its top view is 60° inclined to reference line. If end A is 10 mm from HP and 20 mm from VP, draw the projections. Find the true length and inclinations of line with HP and VP. The line lies in second quadrant.

OR

2. A line PQ, 70mm long has its end P, 15mm above HP and 20mm in front of VP. The line is inclined at 35° to HP and 55° to VP. Draw its projections.

Module 2

3. *A Hexagonal pyramid with base of side 25 mm and axis 60mm long is resting on an edge of the base on HP. Its axis is parallel to HP and inclined at 45° to the VP. Draw its projections.*

OR

4. Draw the projection of a square pyramid of base side 30mm when it lies on the ground on one of its triangular face and axis parallel to VP.

Module 3

5. A cylinder with a base diameter of 50 mm and height 90 mm is resting on its base on the HP. A section plane perpendicular to the VP and inclined at 45° to the HP cuts the cylinder at a point 30 mm from its top end. Draw the front view, sectional top view, and true shape of the section.

OR

6. A pentagonal prism with base of side 30 mm and altitude 50 mm, rests on its base on the HP such that an edge of the base is parallel to VP and nearer to the observer. It is cut by a plane inclined at 45° to HP, perpendicular to VP and passing through the centre of the axis. Draw the development of the surface of the truncated prism.

Module 4

7. Draw the plan and elevation of three consecutive courses for corner joints of the following walls in double Flemish bond.
- (a) One brick-thick wall i.e. 200 x 200 mm. (10 marks)
- (b) One and half brick i.e. 300 x 300 mm. (10 marks)

OR

8. A square pyramid of base edge 20 mm and height 40 mm is mounted centrally on a face of a cube of base edge 50 mm. Draw the isometric projection of the objects.

Module 5

9. A traffic bollard in the form of a hexagonal pyramid of height 50 mm and a base edge of 40 mm is with its apex resting on the ground plane. The central axis of the bollard is perpendicular to the ground plane. Place the station point 15mm behind the picture plane and 50mm above the ground plane, aligned with one edge of the base parallel to the picture plane. Draw the perspective view, indicating all relevant dimensions.

OR

10. Sketch the front view, top view, and right side views of the object shown in the figure below.


