



Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
B.Tech Degree S1(S) Examinations May 2026 (2024 Scheme)

Course Code: GMEST103

Course Name: ENGINEERING GRAPHICS AND COMPUTER AIDED DRAWING

Max. Marks: 60

Duration: 2 hours 30 minutes

Instructions: Retain Construction lines. Show necessary dimensions.

Answer any ONE question from each module.

Each question carries 15 marks

MODULE 1

- | Sl | | CO | Marks |
|----|---|-----|-------|
| 1 | A line AB, 100 mm long, inclined 45° to VP and 30° to HP. One end of the line is 30 mm above the HP and in the VP. Draw the projections, measure the front view and top view, determine the inclinations with HP and VP. | (1) | (15) |
| 2 | One end of the line PQ 100 mm long has one end 30 mm in above the HP and 20 mm in front of the VP. The line is inclined 45° to HP and 30° to VP. Draw the projection of the line if P lies in the first quadrant and Q lies in the second quadrant. Also indicate the traces of the line. What are the apparent inclinations? | (1) | (15) |

MODULE 2

- | Sl | | CO | Marks |
|----|---|-----|-------|
| 3 | A cube of 30 mm side rests with one of its edges on HP such that one of the square faces containing that edge is inclined 30° to HP. The edge on which it rests being inclined to 60° to VP. Draw its projections. | (2) | (15) |
| 4 | A pentagonal pyramid of 30 mm side of base and axis 70 mm long is resting on VP on one of its base edges. The triangular faces contain that edge is lying on VP. The front view of the axis makes 45° to the XY line. Draw the projection of the pyramid with the vertex of the pyramid is nearer to HP. | (2) | (15) |

MODULE 3

- | Sl | | CO | Marks |
|----|---|-----|-------|
| 5 | A cone with base circle diameter 60 mm and axis length 80 mm is kept on its base on the ground. It is cut by a sectional plane perpendicular to HP and inclined at 60° to VP at a distance of 8 mm away from the top view of axis and is in front of | (3) | (15) |

it. Draw sectional elevation and true shape of the section.

- 6 A square pyramid, base 40 mm side and axis 70 mm long, has its base on the HP (3) (15) and all the edges of the base are equally inclined to the VP. It is cut by a section plane, perpendicular to the VP, inclined at 45° to the HP and bisecting the axis. Draw its sectional top view and the development of lateral surfaces of remaining solid.

MODULE 4

- | Sl | | CO | Marks |
|----|--|-----|-------|
| 7 | A cylinder slab 75 mm in diameter and 20 mm thick is surmounted by cube of 37 mm side. On the top of the cube rests a square pyramid of altitude of 37 mm and side of base 25 mm. The axes of the solids are in the same of line. Draw the isometric view of the combination. | (4) | (15) |
| 8 | A square pyramid resting centrally over a cylindrical block which is resting centrally on top of the square block. Draw an isometric projection of the arrangement. Consider the pyramid has a base of 25 mm side and a 40 mm long axis, the cylinder block has a 50 mm base diameter and 20mm thickness and the square block has 70 mm base side and 15 mm thickness. | (4) | (15) |
