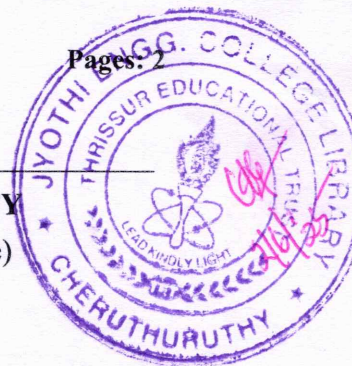


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

B.Tech Degree S1 (S) Examination May 2025 (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**

- |   |   | <b>Marks</b> |
|---|---|--------------|
| 1 | A line MN 75 mm long has a top view of 65 mm and front view of 55 mm. The end point M is 20 mm above HP and 10 mm in front of VP. Draw the orthographic projections of the line, determine the true inclinations, apparent inclinations and locate its traces. Assume that the line is in the first quadrant.                                   | CO1 (15)     |
| 2 | A line CD has one of its ends C 10 mm above HP and 20 mm in front of VP. The front view of the line has a length of 55 mm and is inclined at 40 degrees to the HP. The top view of the line has a length of 55 mm. Find the true length and true inclinations of the line and locate its traces. Assume that the line is in the first quadrant. | CO1 (15)     |

**MODULE 2**

- |   |   | <b>Marks</b> |
|---|---|--------------|
| 3 | A pentagonal prism, side of base 30mm and axis 80mm is resting on a base corner on HP., with its slant edge inclined at 45° to HP and 45° to VP. Draw the projections of the solid.   | CO2 (15)     |
| 4 | A pentagonal pyramid has base edges of 30 mm and height 50 mm. The pyramid is resting on HP on one of its base edges with its axis making an angle of 45 degrees with HP and 40 degrees with VP. Draw the projections of the pyramid. | CO2 (15)     |



**MODULE 3**

- |   |   |     | <b>Marks</b> |
|---|---|-----|--------------|
| 5 | A cylinder of 60 mm height and 50 mm diameter is resting on HP on its base. The cylinder is cut by a section plane perpendicular to VP that has an inclination of 40 degrees to the HP and cuts the axis at a point 10 mm below the top face. Draw the projections of the sectioned cylinder and the true shape of the section. | CO3 | (15)         |
| 6 | A right circular cone of base diameter 50 mm and height 60 mm is resting on HP on its base. A section plane perpendicular to VP and inclined at 30 degrees to HP cuts the cone bisecting its axis. Draw the development of the truncated cone.  | CO3 | (15)         |

**MODULE 4**

- |   |  |     | <b>Marks</b> |
|---|--|-----|--------------|
| 7 | A sphere of 70 mm diameter is kept centrally on top of a cylindrical slab of 60 mm diameter and 10 mm thickness. Draw the isometric view of the combination of solids.   | CO4 | (15)         |
| 8 | A sphere of 25 mm radius is kept on top of a rectangular block. The block has a length of 80 mm, width 60 mm and thickness 15 mm. The sphere is resting at a point which is 30 mm each from two adjacent top edges. Draw the isometric projection of the combination. Assume that the longer edges of the block are perpendicular to X-Y line in the simple position top view and the sphere is seen away from the observer in the isometric projection. | CO4 | (15)         |