

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S1,S2 (Special Examinations) January 2026 (2015 Scheme)

Course Code: BE110**Course Name: ENGINEERING GRAPHICS**

Max. Marks: 50

Duration: 3 Hours

PART A*Answer any two full questions. Each question carries 10 Marks*

Marks

- 1 The end A of a line AB 100mm long is 20mm above HP and 30mm in front of VP. Draw its projections when the inclination of the elevation and plan is 45^0 and 30^0 respectively. Also find the true inclination of the line with HP and VP. (10)
- 2 A line PQ 80mm long has its end P on HP and 15mm in front of VP. The line is inclined 30^0 to HP and its top view is inclined at 60^0 to the reference line. Draw the projections of the line PQ and determine the true inclination with VP. (10)
- 3 A cone of base diameter 50mm and axis height 60mm is kept on the HP with its axis inclined at 40^0 with HP and appears to be inclined at 30^0 with VP. Draw its projections. (10)

PART B*Answer any 3 full questions. Each question carries 10 Marks*

- 4 A sphere of radius 25mm rests centrally on the top of a frustrum of a square pyramid of 40mm side of base and 20mm side of top and axis is 50mm long. Draw the isometric projection of the combination of the solids. (10)
- 5 A cone of base diameter 60mm and axis 70mm is resting upon its base on HP. It is cut by a vertical plane which makes an angle of 45^0 with VP and it is 10mm away from the axis. Draw the sectional front view showing the section and true shape of the section. (10)
- 6 A cylinder of diameter 60mm and length of axis 70mm rests on its base with the axis perpendicular to HP. It is cut by the cutting plane perpendicular to VP, inclined at 45^0 to HP and passing through a point on axis 30mm from the top. Draw the development of the lateral surface of the cylinder. (10)
- 7 A rectangular pyramid base 30mmx20mm and axis 40mm long is resting on its base on the ground plane such that one of its longer edges of the base is touching the picture plane. Draw the perspective view of the pyramid, if the station point is 30mm in front of picture plane 45mm above the ground plane and in a central lane which is 40mm to the left of the axis of the pyramid. (10)
- 8 A square prism of edge of base 50 mm and height 90mm resting on its base on HP with the edges equally inclined to VP is completely penetrated by another horizontal prism, edge of base 35mm and 90mm long having faces equally inclined to HP. The axes of the two prisms are parallel to VP and bisect each other at right angles. Draw the projections of the solids showing the lines of intersection. (10)
