



Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

B.Tech Degree S1 (S,FE) S2 (S,FE) Examinations May 2026 (2019 Scheme)

Course Code: EST110

Course Name: ENGINEERING GRAPHICS
(2019 -Scheme)

Max. Marks: 100

Duration: 3 Hours

Instructions: Retain Construction lines. Show necessary dimensions. Answer any ONE question from each module. Each question carries 20 marks.

MODULE 1

- 1 A line 90mm long is inclined at 45° to HP and 30° to VP. Draw its projections if A is 20mm above and 30mm in front of VP.
- 2 AB=90mm where A is 12mm above HP and 20mm in front of VP. $\theta = 30^\circ$. The length of front view is 65mm. Draw the top view and measure it. Also find ϕ .

MODULE 2

- 3 A square pyramid base 40 mm and axis 75 mm long has a triangular face on the ground. The vertical plane containing the axis makes an angle of 45° with the V.P. Draw its projection with apex nearer to the V.P than the base.
- 4 A right circular cone of base diameter 60 mm and height 70 mm is placed such that one diameter AC of the base is inclined 45° to HP and the other diameter BD of the base is parallel to both HP and VP. Diameter AC and BD are perpendicular to each other. Draw the projections.

MODULE 3

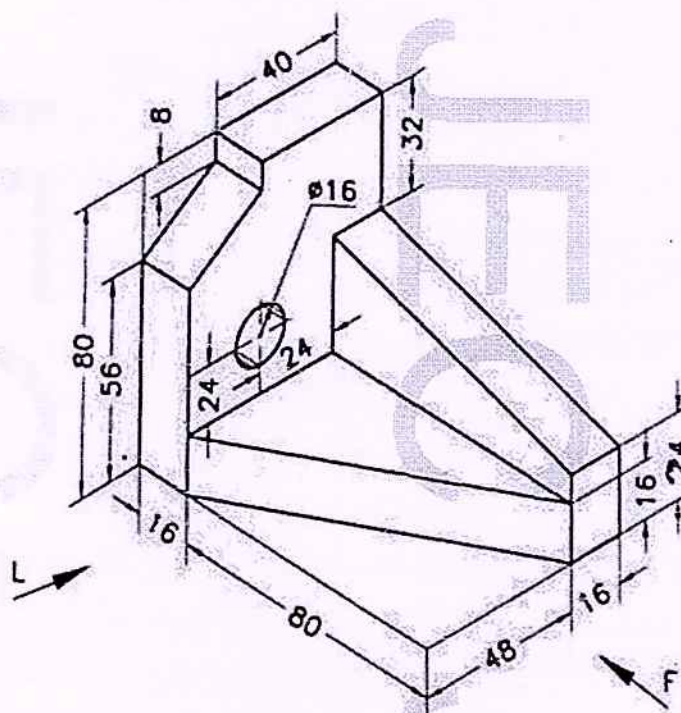
- 5 A pentagonal pyramid, base 36 mm and axis 70 mm long is lying on one of its triangular faces on HP with the axis parallel to VP. A vertical section plane whose HT passes through the top most point of the pyramid in the given position, makes an angle of 30° with the reference line and cuts the pyramid removing a portion of the base. Draw the top view, sectional front view and true shape of the section.
- 6 A right circular cone, 70 mm base and 70 mm height, rests on its base on the ground. A section plane perpendicular to VP and inclined at 30° to HP cuts the cone, bisecting its axis. Draw the development of the lateral surface of the cone.

MODULE 4

- 7 A hemisphere with a diameter of 50 mm is centrally resting on top of a square prism with a base side of 60 mm and a height of 30 mm, such that the curved surface of the hemisphere is touching the top face of the prism. Draw its isometric projections of the combination.
- 8 A cylindrical slab, 60 mm in diameter and 16 mm thick, is surmounted by a cube of 30 mm side. On the top of the cube rests a square pyramid of altitude 30 mm and base side 24 mm. The axes of the solids are in the same straight line. Draw the isometric view of the solids.

MODULE 5

- 9 Draw the perspective view of a pentagonal prism, 20 mm base side and 35 mm long, lying on one of its rectangular faces on ground plane. One of its pentagonal faces touches the picture plane and the station point is 52 mm in front of PP, 25 mm above GP and lies in the central plane, which is 70 mm to the left of centre of the prism.
- 10 Draw the front view and side view of the given figure. Directions given.



(5 x 20 = 100 Marks)
