

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
 Second Semester B.Tech Degree (S, FE) Examination January 2024 (2019 Scheme)



Course Code: EST 110
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 One end of a line CD is 15 mm above HP and 20 mm in front of VP. At the same time the other end is 60 mm above HP and 50 mm in front of the VP. The distance between the end projectors is 70 mm. Draw the projections of the line and locate the traces. Determine the true and apparent lengths. Also find the true and apparent inclinations.
- 2 The top view of a line AB is 70 mm long and is inclined at 45 degrees to XY line. One end of the line is 22 mm above HP and 12 mm in front of VP. The other end of the line is 60 mm above HP and is in front of VP. Find the true length, elevation length and true inclinations of the line with HP and VP. Show the locations of the traces of the line.

MODULE 2

- 3 A square pyramid of base side 30 mm and 60 mm long axis is freely suspended from one of the corners of its base. If the top view of the axis is 50 degrees inclined to XY line, draw the projections of the suspended solid. Make apex nearer to VP and right side of the viewer.
- 4 A triangular prism of base edge 30 mm and height 50 mm is resting on one of its base edges on HP and that base edge is inclined 40 degrees to VP. Draw the projections of the solid if the axis is inclined at 40 degrees to HP. Top end face of the solid is away from VP and right side of the viewer.

MODULE 3

- 5 A pentagonal pyramid of base edge 30 mm and height 70 mm is resting on HP with one of the base edges perpendicular to VP and that base edge is situated left side of the viewer. It is cut by a section plane inclined towards right at 35 degrees to HP and it meets the axis of the solid at a distance 25 mm from the apex. Draw the front view, sectional top view, and true shape of the section.
- 6 A right circular cylinder of 48 mm diameter and 62 mm height is cut by a section plane bisecting the axis inclined to left at 40 degrees to HP. Draw the development of the

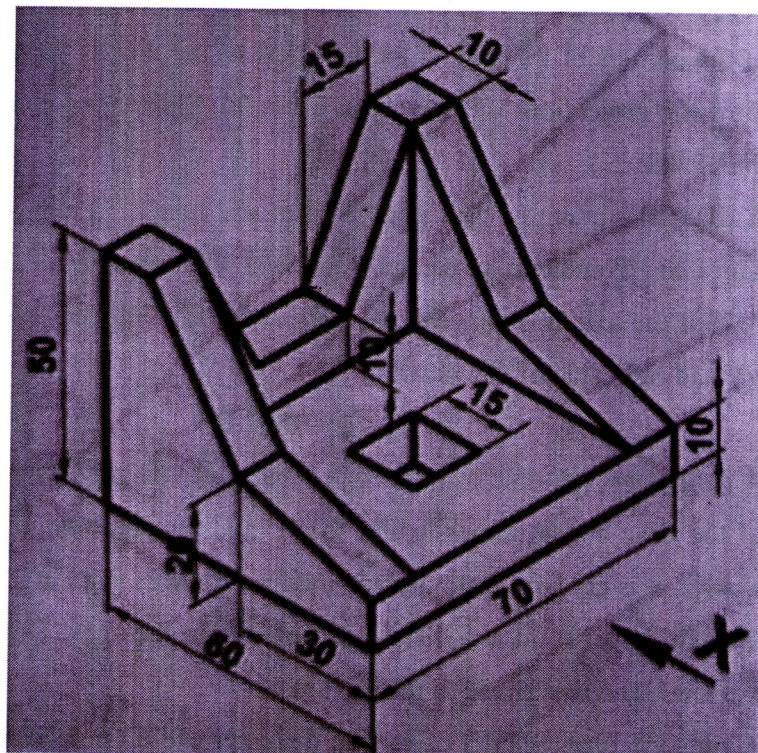
lateral surface of the truncated solid by considering the section plane perpendicular to VP. Also assume that cylinder is resting on its base on HP.

MODULE 4

- 7 A cube of side 52 mm is resting on HP on one of its faces with one of the base edges parallel to VP. A cone with base diameter 46 mm and height 48 mm is resting on the cube on its base with axes of both the solids coinciding each other. Draw the isometric view of the combination of solid.
- 8 A square pyramid of base side 40 mm and height 46 mm rests on its base on top of a hexagonal prism of base side 40 mm and height 36 mm with both the axes coinciding each other. One of the base edges of both the solids are parallel to VP. Draw the isometric view of the combination of solid.

MODULE 5

- 9 A pentagonal pyramid of height 50 mm and base edge 30 mm is resting on its base on ground plane with one base edge parallel, 12 mm behind, and nearer to the picture plane. Draw the perspective view of the solid if the station point is 25 mm in front of the picture plane and 60 mm above the ground plane. Also assume that the central plane is 70 mm to the right of the axis.
- 10 Draw the front view, top view, and left side view of the object given below. Front view should be drawn as seen in the direction of the arrow X. Assume dimensions suitably if found missing.



(5 x 20 = 100 Marks)