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KOTTAYAM, KERALA**(AN AUTONOMOUS COLLEGE AFFILIATED TO
APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)**FIRST SEMESTER B.TECH DEGREE EXAMINATION(S), JULY 2021****Course Code: 20EST110****Course Name: ENGINEERING GRAPHICS****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 I**

1. The end projectors of a line AB are 50 mm apart. The end point A is 40 mm above HP (20) and 25 mm in front of VP. The end point B is 65 mm above HP and 40 mm in front of VP. Draw the projections and find the true length and inclinations with HP and VP. Also locate the traces.

OR

2. The projectors drawn through HT and VT of a straight line are 80 mm apart while the end projectors are 50 mm apart. The HT is 35 mm in front of VP and VT is 55 mm above HP. The end A is 30 mm in front of VP. Draw the projections of AB and determine true length and inclination with plane. . (20)

MODULE II

3. A pentagonal pyramid side of base 25 mm and axis 55 mm long has its axis inclined (20) at 45° to HP. It has an edge of its base in HP and is inclined 30° to VP. Draw its projections.

OR

4. A square pyramid base 40 mm side and axis 90 mm long has a triangular face on the ground and vertical plane containing the axis makes an angle of 45° with VP. Draw its projections (20)

MODULE III

5. A hexagonal pyramid of base 30 mm and axis 90 mm long is resting on its base with (20) one of its base edge parallel and 15 mm away from VP. It is cut by a plane passing through midpoint of axis and one corner of the base which is on the extreme right. The cutting plane is perpendicular to VP. Draw the sectional top view ; true shape and find the inclination of section plane with HP

OR

6. A right circular cone of diameter 50 mm and axial height 80 mm is resting on its base (20) on HP. It is cut by a plane perpendicular to VP and inclined 60° to HP passing through the middle of the axis. Draw the development of lateral surface of the cone.

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MODULE IV

7. A hemisphere of diameter 40 mm is mounted centrally on the top of a square slab of side 60 mm and thickness 15 mm. Draw the isometric view of the solids. Assume the flat surface of the hemisphere positioned upwards. (20)

OR

8. Draw the isometric projection of a funnel consisting of cylinder and a frustum of a cone. The diameter of the cylinder is 20 mm and top diameter of the frustum is 70 mm. The height of the frustum and cylinder each equal to 40 mm. (20)

MODULE V

9. A rectangular prism, side of base 50 mm x 30 mm and height 55 mm. rests with its base on the ground plane. A vertical edge is in the picture plane and one of the longer edge of its base is inclined at 45° to PP and behind it. The station point is 50 mm in front of PP, 75 mm above the ground plane and lies in central plane which passes through the center of the prism. Draw the perspective view. (20)

OR

10. Draw three orthographic views with dimension of the object as shown in figure below. (20)
- Front view in the Diagram
 - Left side view
 - Top view


