

Reg No.: _____

Name: _____

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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

First Semester B.Tech Degree (S. FE) Examination June 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 A line of length 60 mm has its end P is 15 mm above HP and 20 mm in front of VP. Its top view and front view measures 50 mm and 40 mm respectively. Draw its projections and determine its true inclinations with HP and VP. Also locate its traces.
- 2 A line AB of length 75 mm has one of its ends 60 mm in front of VP and 20 mm above HP. The other end is 20 mm in front of VP and is above HP. The top view of the line is 55 mm long. Draw its projections and also locate its traces.

MODULE 2

- 3 A tetrahedron of edge 35 mm is lying on the HP on one of its edges, such that the triangular face containing the resting edge is inclined at 30° to the HP and the resting edge is inclined at 50° to the VP. Draw its projection.
- 4 A square prism of base edge 30 mm and axis length 60 mm is resting on HP on one of its base edges such that the rectangular face containing the resting edge makes an angle of 40° with the HP. Draw its projections if the top view of the axis makes 30° with the VP.

MODULE 3

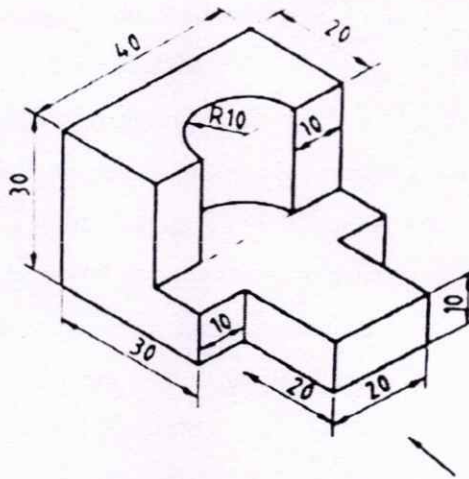
- 5 A hexagonal pyramid of base edge 30 mm and axis length 70 mm is resting on HP on its base. Two of its base edges are parallel to VP while it is resting. It is cut by a section plane perpendicular to VP and inclined at 45° to HP and passing through a point 15 mm above the base and is located on the axis. Draw the front view, sectional top view and true shape of the section.
- 6 A cone of base diameter 50 mm and axis length 70 mm rests with its base on HP. A section plane perpendicular to VP and inclined at 35° to HP and bisects the axis of the cone. Draw the development of the truncated cone.

MODULE 4

- 7 A cone of base diameter 40mm and axis length 60 mm is resting centrally over a square slab of edge length 50 mm and thickness 20 mm. Draw the isometric view of the combination of the solids.
- 8 Draw the isometric projection of a pentagonal prism of base edge length 30 mm and axis length 65 mm, which is lying on the ground on one of its rectangular faces. Assume that the axis of the solid is perpendicular to the vertical plane, while it is resting.

MODULE 5

- 9 A pentagonal pyramid of base edge length 25 mm and axis length 50 mm is resting on ground plane on its base with a side of base is parallel to and 10 mm behind the picture plane. The station point is 60 mm above the ground plane and 40 mm in front of picture plane and lies in a central plane which is 50 mm to the right of the axis of the pyramid. Draw the perspective view of the pyramid. Assume that the edge which is parallel to Picture Plane is nearer to it.
- 10 Draw the three orthographic views (front view, top view and side view) of the object shown in the following figure with dimensions.



(5 x 20 = 100 Marks)
