

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

Second Semester B.Tech Degree Regular and Supplementary Examination June 2023 (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 Distance between end projectors of a line CD is 65mm. End C is 15mm above HP and 40mm in front of VP. Its front view and top view makes an angle of 40° and 45° respectively with XY- line. Draw the projections, find true length and true inclinations with HP and VP and locate its traces. The line is in the first quadrant.
- 2 The front view of a line AB measures 70mm and makes an angle of 50° with XY-line. The end A is in the HP and the VT of the line is 30mm above HP. The line is inclined at 40° to the VP. Draw the projections of the line, find its true length and true inclination to HP and locate its HT.

MODULE 2

- 3 A hexagonal prism of base edge 25 mm and height 60 mm is resting on one of its base edges on HP. Draw its projection if the rectangular face carrying that base edge is inclined 35° to HP and the base edge at which it is resting is inclined 40° to VP.
- 4 Draw the projections of a triangular pyramid 35mm side and height 65 mm long, if it is resting on one of the corners of the base in HP with the slant edge containing that base corner making an angle of 30° with HP and top view of the axis making an angle of 45° with XY- line.

MODULE 3

- 5 A pentagonal pyramid side of base 30 mm, height 65 mm has its base on the ground and one of its base edge is parallel to and nearer to VP. This pyramid is cut by a section plane perpendicular to VP, passing through a point on the axis which is 20 mm below the apex and making an angle of 40° with HP. Draw the front view, sectional top view and true shape of the section.

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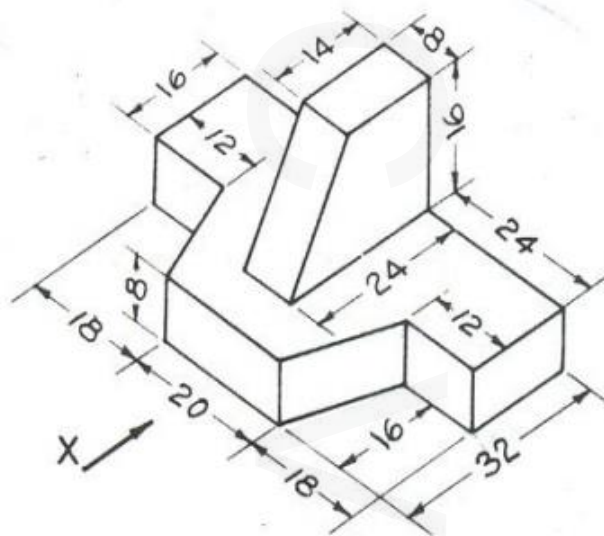
- 6 A square prism is resting on its base on HP with two base edges equally inclined to VP. A cutting plane perpendicular to VP and inclined 45° to HP cuts the solid meeting the axis 15 mm above the bottom base. Draw the development of the bottom portion. The base edge of the prism is 30 mm, and the height is 60 mm

MODULE 4

- 7 A hemisphere of diameter 60 mm is placed centrally over a square slab of side 50mm and height 40 mm, with its flat surface facing upward. Draw the isometric view of the combination.
- 8 A hexagonal pyramid of base edge 25 mm and height 40 mm is surmounted centrally over a cube of 50 mm side. The cube is lying on HP on one of its square face so that one base edge of the cube and one base edge of the pyramid are parallel to VP. Draw the isometric view of the combination.

MODULE 5

- 9 A pentagonal pyramid of base side 30mm and height 55mm, rests on its base on the Ground Plane with one base edge is parallel to and 10 mm behind the Picture Plane (PP). The Station Point is situated at a distance of 70 mm in front of the PP, 40 mm to the right of the axis of the pyramid and 65 mm above the Ground Plane. Draw the perspective view of the pyramid.
- 10 Draw the orthographic projections (front view, top view and left side view) of the following figure. The front view direction is marked with a long arrow marking as X. Any missing dimension may be suitably assumed. All dimensions are in mm.



(5 x 20 = 100 Marks)
