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Reg. No._____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
FIRST SEMESTER B.TECH DEGREE EXAMINATION, JANUARY 2017
(Regular & Supplementary)

Course Code: **BE 110**
Course Name: **ENGINEERING GRAPHICS**

Max. Marks : 50   Duration : 3 Hours

PART A
Answer ANY TWO question (2x10=20 Marks)

1. A line AB inclined at 45^0 to VP has its ends 20 mm and 50 mm above HP. The length of its front view is 70 mm and its VT is 10 mm above HP. Find its true length, true inclination with HP and locate its traces.

2. An electric lamp is hung vertically from the centre of the flat roof of a room (5m x 5m and height 6m), at a height of 4m above the floor. Find graphically the distance between the lamp and any one of the floor corner.

3. A square pyramid 40mm base edge and 60 mm height is on HP with one of its base edges so that the axis is making 45^0 with HP and the base edge making 30^0 with VP. Draw the projections

PART B
Answer ANY THREE question   (3x10=30 Marks)

4. A cone of base diameter 50 mm and axis 65 mm is resting upon its base on HP. It is cut by a vertical plane which makes an angle of 45^0 with VP and is 10 mm away from the axis. Draw the sectional front view showing the section and true shape of the section.

5. A sphere of radius 25 mm rests centrally on the top of the frustum of a square pyramid of 40 mm side of base and 20 mm side at the top and the axis is 50 mm long. Draw the isometric projection of the solids in the given position.

6. A right circular cylinder of base diameter 50 mm and height 70 mm resting upon HP on its base. An insect starts from a point on the base edge at the bottom, moves around the curved surface of the cylinder and reaches the top after completing two revolutions along the shortest path. Draw the development and sketch the path of the insect in the front view.

7. A rectangular pyramid base 35 mm x 45 mm and axis 50 mm long is resting on its base on the ground plane such that one of its longer edges of base is touching on the picture plane. Draw the perspective view of the pyramid, if the station point is 60 mm in front of picture plane 35 mm above ground plane and in the central plane which is 50 mm to the left of the axis of the pyramid.

8. A vertical cylinder of 60 mm diameter has a circular hole of 30 mm side cut through the centre of the cylinder. The axis of the hole is horizontal and 8 mm from the axis of the cylinder. Draw the projection showing the curve of intersection of the hole. The axis of the hole is parallel to VP. Assume suitable height for the prism.