

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
FIRST SEMESTER B.TECH DEGREE EXAMINATION DECEMBER 2017

**Course Code: BE110**

**Course Name: ENGINEERING GRAPHICS**

Max. Marks: 50

Duration: 3 Hours

**PART A**

*Answer any two full questions, each carries 10 marks.*

- 1 A straight line PQ is 100 mm long. The end P is in HP and 20 mm in front of VP. The line PQ is inclined at  $30^\circ$  to the HP and  $20^\circ$  to VP. Draw the projections of the line if the end Q is in second quadrant. (10)
- 2 The line AB measuring 60 mm has its VT 15 above HP. The end B is 30 mm above HP and 35 mm in front of VP. The projectors through B and VT are 80 mm apart. Draw the projection and find the inclination of the line with HP and VP. (10)
- 3 Draw projections of a cone of base diameter 30mm and height 40 mm resting on HP on its generator with top view of axis inclined  $30^\circ$  to VP (10)

**PART B**

*Answer any three full questions, each carries 10 marks.*

- 4 A vertical cylinder of base diameter 40 mm and height 35 mm is resting on ground. A sphere of diameter 20 mm resting centrally over the top face of cylinder. Draw the isometric view of combination. (10)
- 5 A square prism having base of side 30 mm, is cut by a sectional plane such that the true shape is a hexagon having two opposite sides 25 mm long and the remaining four sides 40 mm long. Draw top view, front view and true shape. Determine the height of the prism. (10)
- 6 A hexagonal prism of 20 mm base and 60 mm height resting on its base on HP such that two base edges are perpendicular to VP. It is cut by a surface which is inclined at  $30^\circ$  to HP and perpendicular to VP. This plane passing through the midpoint of the axis of the prism. Draw the development of bottom portion (10)
- 7 A horizontal cylinder of 40 mm diameter penetrates a vertical cylinder of 60 mm diameter resting on HP. The two axes are coplanar. Draw the projections showing the curve of the intersection (10)
- 8 Draw the perspective view of a square prism of base side 30mm and height 60mm resting on its base with one of the base edges 10mm behind and parallel to PP. The Central Plane is passing through the axis of prism and SP is located 50mm in front of PP and 40 mm above GP. (10)

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