

11007

Reg. No.: .....

Name: .....



FIRST/SECOND SEMESTER B.TECH DEGREE EXAMINATION, JULY 2019

Course Code: BE110

Course Name: ENGINEERING GRAPHICS

Max. Marks: 50

Duration: 2 Hours

**PART A**

*Answer ANY ONE question (1x 11=11 Marks)*

1. Three wires AB, CD and EF are tied at points A, C, E on a 14 m long vertical pole at heights 12 m, 10 m and 8 m, respectively, from the ground. The lower ends of the wires are tied to hooks at points B, D and F on the ground level, all of which lie at the corners of an equilateral triangle of 7.5 m side. If the pole is situated at the centre of the triangle, determine the length of each rope and its inclination with the ground.
2. The front and top views of a straight line PQ measures 50 mm and 65 mm, respectively. The point P is on the HP and 20 mm in front of the VP. The front view of the line is inclined at  $45^\circ$  to the reference line. Determine the true length of PQ and its true inclinations with the reference planes. Also, locate the traces.

**PART B**

*Answer ANY THREE Questions (3 x 13 = 39 Marks)*

3. A pentagonal prism of 25 mm base side and 50 mm axis length is resting on the H.P. on one of its base corners with its axis inclined at  $40^\circ$  to the H.P. and parallel to the V.P. Draw its projection when the base sides containing the resting corner are equally inclined to the H.P.
4. A hexagonal prism having base with a 30mm side and 40mm height is surmounted by a hemisphere such that the hemisphere is touching all the edges of the top face. Draw the isometric view of the arrangement.
5. A cone with a 50 mm base diameter and a 70 mm long axis, rests on its base on the H.P. Draw the sectional top view and the development of its lateral surface when it is cut by an inclined plane bisecting the axis and inclined at  $45^\circ$  to the H. P.
6. A square prism, having base with a 50mm side, is resting on its base on the H. P. It is completely penetrated by another square prism having base with a 40 mm side, such that the axes of both the prisms intersect each other at right angles and faces of both the prisms are equally inclined to the V.P. Draw the projections of the combination and show the lines of intersection.

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