R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, November/December - 2020
ENGINEERING GRAPHICS
(Common to CSE, IT, ITE)

Time: 2 hours | Max. Marks: 75

Answer any three questions
All questions carry equal marks

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1. Construct a diagonal scale of RF = 1:3200000 to show km and long enough to measure up to 400kms. Show distances of 257km and 333km on your scale. [25]

2. A Roller of 50mm diameter rolls on a straight line without slip in the initial position of a diameter PQ of the circle is parallel to the line on which it rolls. Draw the locus of the point P for one complete revolution of the roller. Name the curve. Draw the tangent and normal at any point on the curve. [25]

3. A straight line PQ has the end P at 15 mm above the H.P. and 60 mm in front of the V.P., and the end Q is 45 mm above the H.P. and 10 mm in front of the V.P. If the end projectors are 55 mm apart, draw the projections of the line. Determine its true length and true inclination with the principal planes. [25]

4. A hexagonal prism, having a base with a 25 mm side and a 70 mm long axis is resting on a corner of its base in the H.P. and axis inclined at 60^0 to the H.P. and parallel to the V.P. It is cut by a horizontal section plane which divides the prism into two equal halves. Draw its sectional top view. [25]

5. A cone of diameter of base 50mm and axis 60mm long, is resting on its base on HP. Draw the projections, development of the cone and show on it, the shortest path traced by a point, starting from a point on the circumference of the base of the cone, moving around it and reaching the same point. [25]

6. Draw the following views of the block. All dimensions are in mm. [10+15]
   a) Front view   b) Top view.

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