Code No: 132AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, August - 2019
ENGINEERING GRAPHICS
(Common to CSE, IT, ETM)

Time: 3 hours

Max Marks: 75

Answer all five questions
All questions carry equal marks

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1.a) Construct a diagonal scale of RF=1/2000, to show meters and long enough to measure up to 300 m. Mark on it a distance of 257 m.

b) Draw the hyperbola when the focus and the vertex are 25 mm apart. Consider eccentricity as 3/2. Draw a tangent and normal to the curve at a point that is 35 mm from the focus.

[7+8]

OR

2. A circle of 50 mm diameter rolls on a straight line without slipping. Draw the curve traced out by a point P on circumference, for one complete revolution of the circle. Name the curve. Draw the tangent to the curve at a point on it 40 mm from the line. [15]

3. A line AB, 65 mm long, has its end A is 20 mm above H.P. and 25 mm in front of the V.P. The end B is 40 mm above the H.P. and 65 mm in front of the V.P. Draw the projections of AB. Determine its inclinations with H.P and V.P. [15]

OR

4. Draw a rhombus of diagonals 100 mm and 60 mm long, with the longer diagonal horizontal. The figure is the top view of a square of 100 mm long diagonals, with a corner on the ground. Draw its front view and determine the angle which its surface makes with the ground. [15]

5. A square pyramid of base 40 mm side and 60 mm long has its base in the V.P. One of the edges of the base is inclined at 30^0 to H.P and a corner contained by that edge is in H.P. Draw its projections. [15]

OR

6. A pentagonal prism of side of base 30 mm and axis 70 mm is resting on one of its base edges in H.P. with its axis inclined at 45^0 to H.P. The top view of the axis is inclined at 30^0 to V.P. Draw the projections. [15]

7. A cone of base diameters 50 mm and axis 60 mm long rests with its base on H.P. It is cut by a section plane perpendicular to H.P. and inclined at 60^0 to V.P. and at a distance of 10 mm from the axis. Draw the sectional front view and true shape of section. [15]
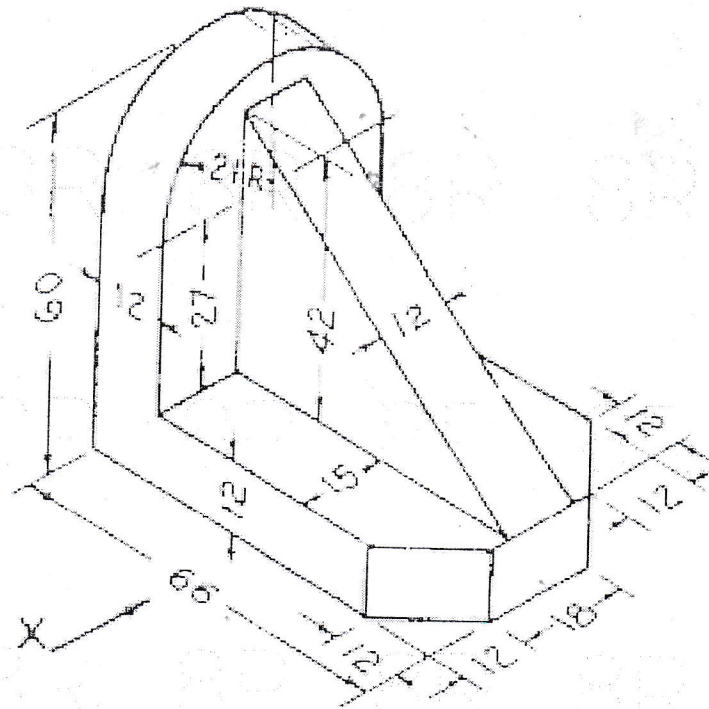
OR

8. A right circular cone, 70 mm base and 70 mm height, rests on its base on the ground plane. A section plane perpendicular to VP and inclined at 30^0 H.P cuts the cone, bisection its axis. Draw the development of the lateral surface of the cone. [15]

9. A cone of 3 cm diameter 4 cm height is placed centrally on the top of a square prism of 5 cm side and height 4 cm. Draw the Isometric Projection of the combination of the solids. [15]

OR

10. Draw the following views of the object given in figure. All dimensions are in mm.
   a) Front View b) Top View and c) Side View from the right. [15]

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