Code No: 152AG

R18

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, July/ August - 2021
ENGINEERING GRAPHICS
(Common to EEE, IT)

Time: 3 Hours **Max Marks: 75**

Answer any three questions
All questions carry equal marks
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1.a) A stone is thrown from a building of 6 meters height. It just crosses the top of a tree 12 meters high. Trace the path of projectile if the horizontal distance between the building and the tree be 4.0 meters. Also find the distance of the point from the building where the stone falls on the ground.

b) Construct a plain scale to compute time in minutes and distance covered by a train in km., when the train passes between two stations 250 km apart in five hours. The scale should have R.F. 1/500000. Show the distance covered in 45 minutes on the scale. [12+13]

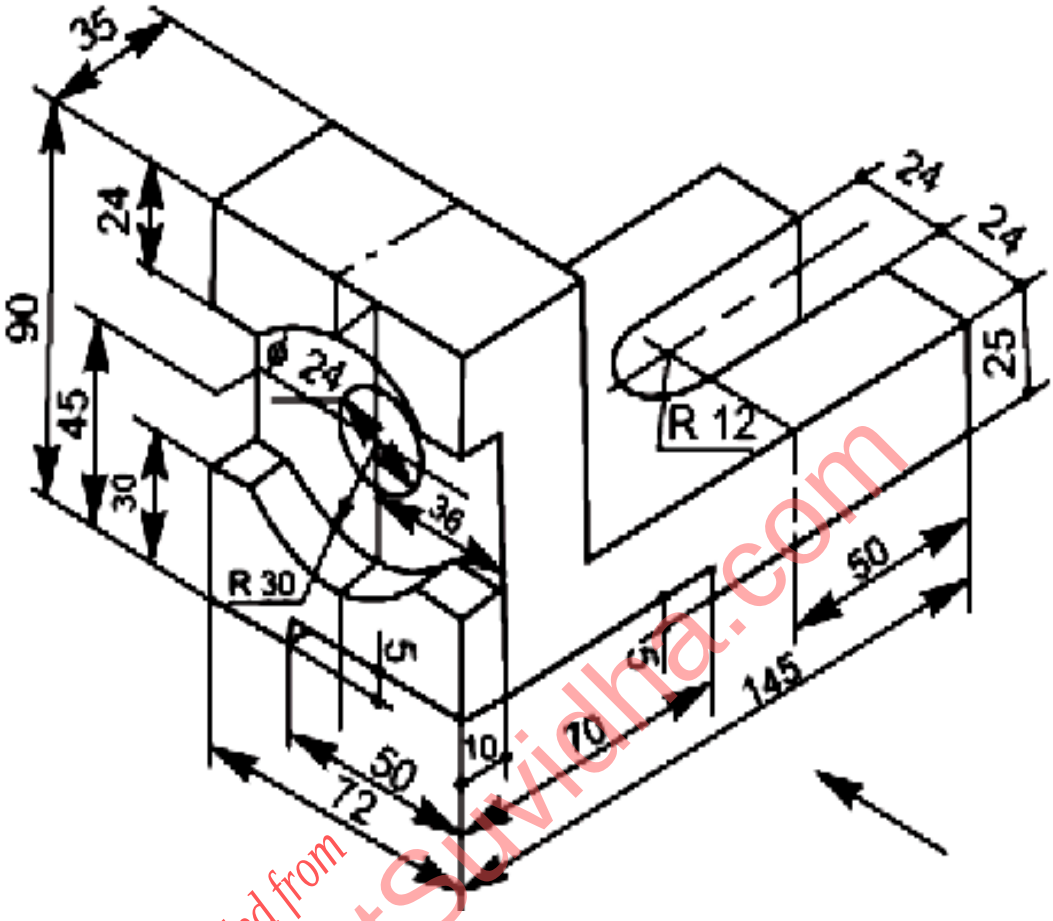
2. The distance between the projectors of two ends of a straight line is 60 mm. One end is 15 mm above HP and 50 mm in front of VP. The other end is 60 mm above HP and 10 mm in front of VP. Draw the projections and find the true length of the line. [25]

3. A hexagonal pyramid of base 25 mm side and axis 55 mm long has one of its slant edges on the ground. A plane containing that edge and the axis is perpendicular to the H.P and inclined at 45^0 to the V.P. Draw its projections when the apex is nearer to the V.P than the base. [25]

4. A cone, base 70 mm diameter and axis 100 mm long, has its base on the ground. A section plane, parallel to one of the end generators and perpendicular to the VP cuts the cone intersecting the axis at a point 75 mm from the base. Draw the sectional top view and true shape of the section. [25]

5. A pipe of 45 mm diameter is welded to the vertical side of a rectangular steel tank. The axis of the pipe 100 mm long is inclined at an angle of 60^0 to the side to which it is welded. The other end of the pipe makes an angle of 30^0 to its own axis. Draw the development of the pipe. Neglect the pipe thickness. [25]

6. For the object shown in the figure 1 draw the following views. All dimensions are in mm.
a) Front view in the direction of arrow b) Top view. [13+12]



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