R16

Code No: 132AE

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B.Tech I Year II Semester Examinations, August/September - 2017
ENGINEERING GRAPHICS
(Common to EEE, ECE, EIE)

Time: 3 hours   Max. Marks: 75

Answer all five questions
All questions carry equal marks
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1.a) Construct a scale of 1:5 to show decimeter and centimeter long enough to measure up to 1m. Show a distance of 6.3 decimeter on it.

  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. Draw a cycloid for one complete revolution of a circle having a 50 mm diameter. Draw tangent and a normal to the curve at a distance 35 mm above the base line. [15]

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. [15]

OR

4. A square lamina with a 50 mm side rests on the H.P., on one of its corners, such that the diagonal through that corner is parallel to the V.P. and inclined at 30^0 to the H.P. Draw its projections when the lamina is perpendicular to the V.P. Measure the distance of the topmost corner from the H.P. [15]

5. A pentagonal pyramid, base 25 mm side and axis 60 mm long has one of its triangular faces in the VP and the edge of the base contained by that face makes an angle of 30^0 with the HP. Draw its projections. [15]

OR

6. Draw the projections of a cone, base 45 mm diameter and axis 50 mm long, when it is resting on the ground on a point on its base circle with the axis making an angle of 30^0 with the HP and 45^0 with the VP. [15]

7. A square prism with a base having 40 mm sides and height 60 mm is kept on its base on the H.P. such that one of its rectangular faces makes an angle of 30^0 with V.P. It is cut by a section plane parallel to V.P. such that the true shape of the section is a rectangle with 30 mm and 60 mm sides. Draw its sectional front view and top view. [15]

OR

8. In a vertical cylinder of 48 mm diameter and 72 mm height rest with its base on HP. A square hole of 24 mm side is made through it such that the axis of the hole is parallel to HP and perpendicular to VP. The bases of the square hole are inclined equally on HP and axis bisects the axis of the cylinder. Develop the lateral surface. [15]
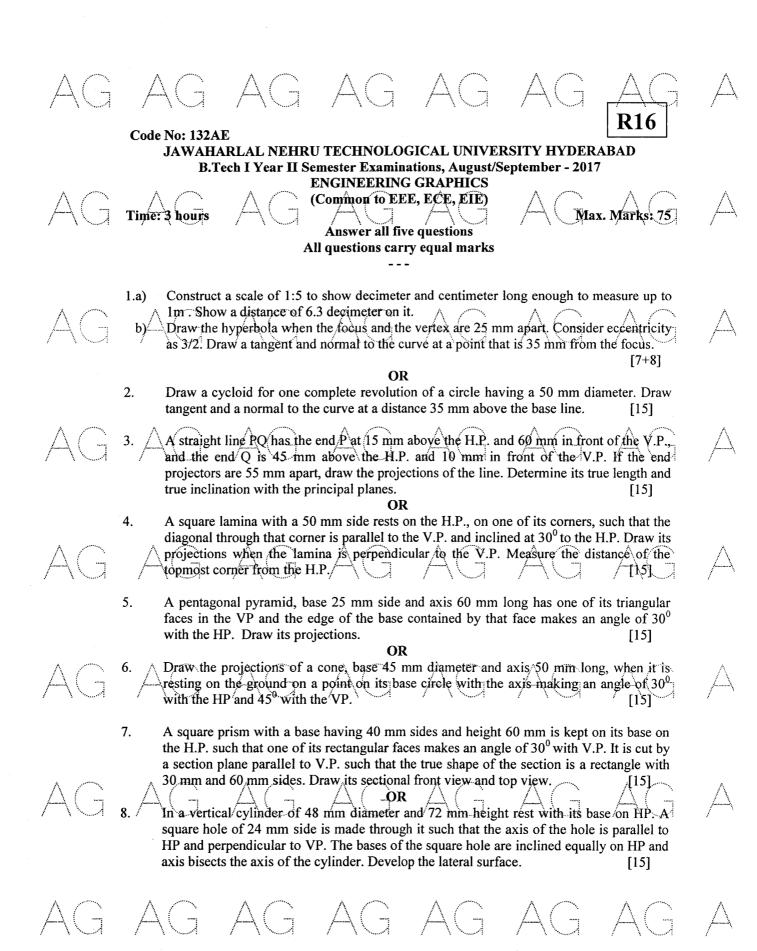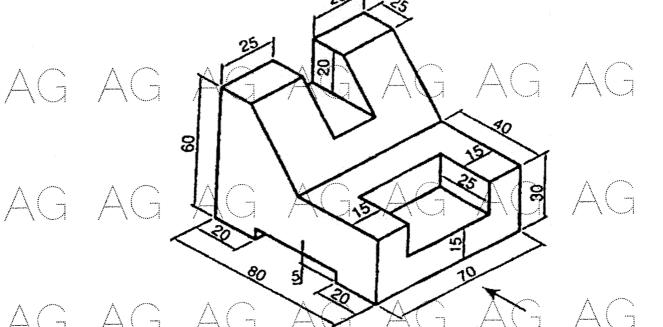
9. A cylinder, with diameter of base 60 mm and axis 70 mm long, is resting on its base on HP. A section plane, perpendicular to VP and inclined at 45^0 to HP, passes through the axis at a distance of 20mm from its top end. Draw the isometric projection of the truncated cylinder.   [15]

OR

10. Draw the orthographic projections (front view, top view and side view) of the following figure. All dimensions are in mm.   [15]

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