G 1285 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2015

First and Second Semester

EN 010 105—ENGINEERING GRAPHICS

[Common for AI, CE, EC, EE, EI, PE, IC and MT Branches]

(New Scheme—2010 Admission onwards)

(Regular/Improvement/Supplementary)

Time : Three Hours Maximum : 100 Marks

Answer **all** *questions. Each full question carries* 20 *marks.*
Retain all the construction lines.
Drawing sheets will be supplied.

1. Construct a prabola in parallelogram of side 100 mm and 45 mm and with an included angle 75°. Find the focus and directrix.

Or

2. The asymptotes of a hyperbola are making 70° with each other. A point P on the curve is at a distance of 40 mm from the horizontal asymptote and 50 mm from the inclined asymptote. Plot the curve. Draw a tangent and a normal to the curve at any point.

3. Draw the projections of a line AB, 90 mm long, its mid point M being 50 mm above the HP and 40 mm infront of VP. The end A is 20 mm above the HP and 10 mm infront of the VP.

Or

4. Draw the projections of a rhombus having diagonals 125 mm and 50 mm long, the smaller diagonal of which is parallel to both the principal planes, while the other is inclined at 30° to HP.

5. A tetrahedron of 80 mm long edge has an edge parallel to the HP and inclined at 45° to the VP ; while the face containing that edge is vertical. Draw its projections.

Or

6. A cube of 50 mm edges is cut by a section plane so that the true shape of section is a rhombus of sides of maximum length. Draw the sectional front and top views and the true shape of section.

7. A vertical cylinder is 80 mm diameter and 100 mm high. A circular hole of 65 mm diameter is drilled centrally such that the axis of the hole bisects the axis of the cylinder at right angles and is perpendicular to VP. Develop the lateral surface of the cylinder showing the true shape of the hole in it.

Or

8. A tetrahedron of sides 40 mm is resting centrally on the largest face of rectangular block of size 60 mm × 80 mm × 40 mm. Draw the isometric projection of the combination of solids.

Turn over

9. A square pyramid of side of base 40 mm and axis 50 mm long, rests with its base on the ground plane such that all the edges of the base are equally inclined to PP. One of the corners of the base is touching the PP. The station point is 60 mm in front of the PP; 80 mm above the ground plane and lies in a central plane which passes through the axis of the pyramid. Draw the perspective view.

Or

10. A cylinder of 80 mm diameter, resting on its base in the HP ; is penetrated by another cylinder of 50 mm diameter. The axis of small cylinder is parallel to HP and VP and coaxial to standing cylinder. Draw the projections of combination of solids.

[5 × 20 = 100 marks]