

G 1287

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Reg. No.....

Name.....



B.TECH. DEGREE EXAMINATION, MAY 2015

First and Second Semester

EN 010 105—ENGINEERING GRAPHICS

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

{Common for AN, AU, CS, IT, ME, PO, CH and ST}

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Each question full carries 20 marks.

Retain all the construction lines.

Drawing sheets to be supplied.

1. Draw an ellipse if the conjugate diameters are 150 mm. and 108 mm. with an included angle of 80° . Also draw major and minor axis.

Or

2. Draw the parabola with the vertex located 20 mm. from the directrix. Also draw the normal and tangent to the curve from a point 50 mm. from the focus of the curve.
3. The front view of a line AB measures 65 mm. and makes an angle 45° with XY. A is in the HP and VT of the line is 15 mm. below the HP. The line is inclined at 30° to VP. Draw the projections of AB and find its true length and inclination with the HP. Also locate its HT.

Or

4. A circle of 60 mm. diameter appears as an ellipse in the top view, having its major axis 60 mm. long and minor axis 40 mm. long. Draw the projections when the major axis parallel to both the planes.
5. A cone of base diameter 50 mm. and axis length 60 mm. is resting on VP on one of its generators with the front view of the axis is inclined at 40° to HP. Draw its projections.

Or

6. A hexagonal prism 25 mm. side and 70 mm. long rests with one of its rectangular faces on ground with the axis parallel to VP. A section plane perpendicular to VP and inclined at 30° to HP bisects the axis of the prism. Draw its sectional top view and true shape of section.

Turn over

7. A sugar jar in the form of a right circular cone of base diameter 60 mm. and height 90 mm. and its rests on HP. An ant moves from extreme left end of its base returns to its starting point, after moving around it. Find geometrically the length of the shortest path the ant can take. Show the path in front and top view.

Or

8. A sphere of diameter 40 mm. rests centrally on the top smaller end of a frustum of a hexagonal pyramid. The frustum is 25 mm. at the top and 40 mm. sides at the base and 70 mm. long. Draw the isometric projection of the combination of solids.
9. A cube of side 40 mm. is resting on the ground such that one of its faces is parallel to and mid of the solid is on the picture plane. The central plane is located 20 mm. to left of the nearest corner of the cube. The station point is 60 mm. in front of picture plane and 70 mm. above the ground plane. Draw the perspective view of the solid.

Or

10. A vertical square prism of 50 mm. side of base has its rectangular faces equally inclined to VP. It is penetrated by another square prism with two faces equally inclined to HP and axis parallel to both the HP and VP. Draw the projection of solids. (Assume small prism axis meets large prism).

(5 × 20 = 100 marks)

