-Roll No.										

B.E. (FULL TIME) DEGREE END SEMESTER EXAMINATIONS, APRIL/MAY 2014

FIRST SEMESTER - (REGULATIONS 2004/2008)

GE171/ GE 9111 ENGINEERING GRAPHICS

Time: 3 Hours Max. Marks: 100

Note: i) Drawings should be neat and legible

ii) Standards should be followed for dimensioning and printing

ANSWER ALL QUESTIONS (5x 20 = 100 Marks)

1. Draw an ellipse when the eccentricity is 2/3 and the distance of the focus from the directrix is equal to 50mm. Also draw a normal and tangent to a point on the ellipse which is at a distance of 75mm from the directrix.

2.a) The front and top views of a line DE 60mm long measures 50mm and 60 mm respectively. One end of the line D is 15 mm above HP and 25 mm in front of VP. Draw the projections and find the true inclinations of the line DE with HP and VP.

OR

2.b) Draw the projections of a regular hexagon of 25mm side, having one of its sides in the HP and inclined at 60° to the VP. Its surface makes an angle of 45 ° with the HP.

3.a) Draw the projections of a pentagonal prism, base 25mm side and axis 50mm long, resting on one of its rectangular faces on the HP with its axis inclined at 45° to the VP.

OR

3.b) A cone of base 75mm diameter and axis 80mm long is resting on its base on the HP. It is cut by a section plane perpendicular to the VP and inclined at 45 ° to the HP and cutting the axis at a point 35mm from the apex. Draw its front view, sectional top view and true shape of the section.

4.a) A vertical cylinder of diameter 60mm and height 80mm is completely penetrated by another cylinder of diameter 35mm and height 80mm such that their axes bisect one another at right angles. Draw their projections showing curves of penetration, assuming the axis of the penetrating cylinder to be parallel to the HP.

OR

4.b) Develop the lateral surface of the lower part of a truncated cylinder shown in the figure 4b of diameter 45mm and height 60mm.

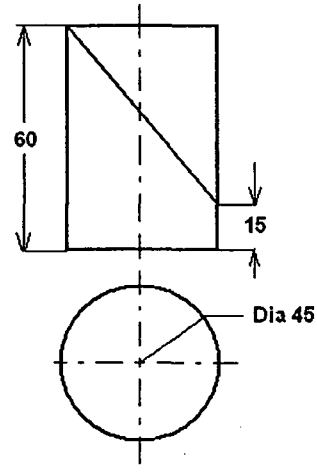

Fig. 4b

5.a) Draw the isometric view of a frustum of a hexagonal pyramid when it is resting on its base on the HP with two sides of the base parallel to the VP. The side of the base is 20mm and top is of side 8 mm. The height of the frustum is 55mm.

OR

5.b) A rectangular prism of base 50mm x 30mm and height 55mm rests on its base on the ground. A vertical edge is in the picture plane and one of the longer edges of the base is inclined at 45 ° to PP and behind it. The station point is 50mm in front of PP, 75mm from the ground and lies in a central plane which passes through the centre of the prism. Draw the perspective view.