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**Question Paper Code : 27271**

**B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2015**

**First Semester**

**Civil Engineering**

**GE 6152 : ENGINEERING GRAPHICS**

**(Common to all branches)**

**(Regulations : 2013)**

**Time : 3 Hours]**

**[Max. Marks : 100**

**Note :** Blank answer Booklet consisting of A3 drawing sheets is to be supplied to the students.

**Answer ALL questions.**  
**(5 × 20 = 100 Marks)**

1. (a) (i) Draw the involute of a circle of diameter 40 mm. **(10)**
- (ii) Draw a hyperbola given the distance of the focus from the directrix as 55 mm and eccentricity as 1.5. **(10)**

**OR**



4. (a) A right circular cone of base diameter 50 mm and axis length 60 mm rests on its base on the HP. It is cut by a plane perpendicular to the HP and inclined at  $60^\circ$  to the VP. The shortest distance between the cutting plane and the top view of the axis is 8 mm. Draw the top view, sectional front view and the true shape of the section.

**OR**

- (b) A pentagonal prism of base side 25 mm and height 60 mm stands on one of its ends on the HP with a rectangular face parallel to the VP. A hole of diameter 30 mm is drilled centrally through the prism in such a way that the axis of the hole bisects the axis of the prism at right angles. The axis of the hole is perpendicular to the VP. Draw the development of the lateral surfaces of the prism.
5. (a) A pentagonal pyramid of base edge 20 mm and height 60 mm rests on its base on the HP with a base edge parallel to the VP and further away from the VP. A section plane perpendicular to the VP and inclined at  $45^\circ$  to the HP cuts the axis of the pyramid at a point 33 mm from the vertex. Draw the isometric view of the truncated pyramid such that the cut surface is visible.

**OR**

- (b) A square prism of base  $25 \times 25$  mm and height 40 mm rests on the GP on one of its ends with a rectangular face receding away from the PP towards right making  $60^\circ$  with PP. The corner nearest to the PP is 40 mm to the left of the station point and 20 mm behind the PP. The station point is 60 mm above the GP and 50 mm in front of the PP. Draw the perspective view of the prism by Visual ray method. Use the top views and front views.