



Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code : 42638

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018

First Semester

Civil Engineering

GE 2111 – ENGINEERING GRAPHICS

(Common to all Branches)

(Regulations 2008)

Time : Three Hours

Maximum : 100 Marks

Diagrams should be neat and tidy.

Lettering, Dimensioning and naming of diagrams carry marks.

Correct usage of H,2H,HB pencils should be followed while drawing.

A3 size booklets consisting of 5 sheets would be given.

Answer ALL questions.

(5×20=100 Marks)

1. A) Draw free hand sketches of the front, top and right side views of block shown in Fig.1.

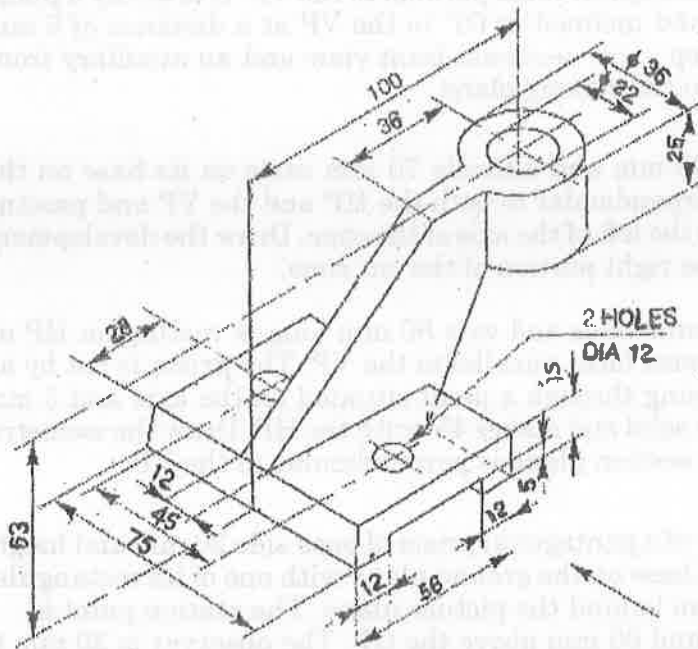


Fig.1

(OR)



B) Construct an ellipse with the distance of focus from the directrix as 50 mm and eccentricity as $\frac{2}{3}$. In addition, draw a normal and tangent to the curve at a point 40 mm from the directrix.

2. A) The end P of a line PQ, 70 mm long is 15 mm above the HP and 20 mm in front of the VP. Q is 40 mm above the HP. Its top view is inclined at 45° to the VP. Draw the projections of the line and find its true inclinations with the VP and the HP.

(OR)

B) A hexagonal plate of side 20 mm rests on the HP on one of its sides inclined at 45° to the VP. The surface of the plate makes an angle of 30° with the HP. Draw the front and top views of the plate.

3. A) A cone of base 60 mm diameter and axis 80 mm long rests on HP with its axis inclined 45° to it. Draw its projections when the top view of the axis is parallel to VP.

(OR)

B) A hexagonal prism of base side 30 mm and axis length 70 mm rests on one of its corners of base on HP. Draw its projections, when the lateral edge through that corner on HP is inclined at 30° to HP and the vertical plane containing that lateral edge and the axis is parallel to VP.

4. A) A hexagonal prism of base side 20 mm and height 40 mm rests on the HP on one of its ends with two rectangular faces parallel to the VP. It is cut by a plane perpendicular to the HP and inclined at 60° to the VP at a distance of 5 mm from the axis. Draw the top view, sectional front view and an auxiliary front view on an AVP parallel to the cutting plane.

(OR)

B) A cone of base diameter 60 mm and altitude 70 mm rests on its base on the HP. It is cut by a plane perpendicular to both the HP and the VP and passing through the cone 10 mm to the left of the axis of the cone. Draw the development of the lateral surface of the right portion of the cut cone.

5. A) A hexagonal prism of 30 mm sides and axis 80 mm long is resting on HP on its base with two of its lateral faces parallel to the VP. The prism is cut by an inclined section plane passing through a point situated on the axis and 5 mm below the top surface of the solid and makes 45° with the HP. Draw the isometric view of the cut solid if the section plane is perpendicular to the VP.

(OR)

B) Draw the perspective view of a pentagonal prism of base side 20 mm and height 40 mm when it rests on its base on the ground plane with one of its rectangular faces parallel to and 20 mm behind the picture plane. The station point is 45 mm in front of the PP and 60 mm above the GP. The observer is 20 mm to the left of the axis. Use the top view and the end view to draw the perspective by visual ray method.