

1B  
6.14AN

Reg. No. : 

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

**Question Paper Code : 71643**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

First Semester

Civil Engineering

GE 2111/ME 15 — ENGINEERING GRAPHICS

(Common to all Branches)

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

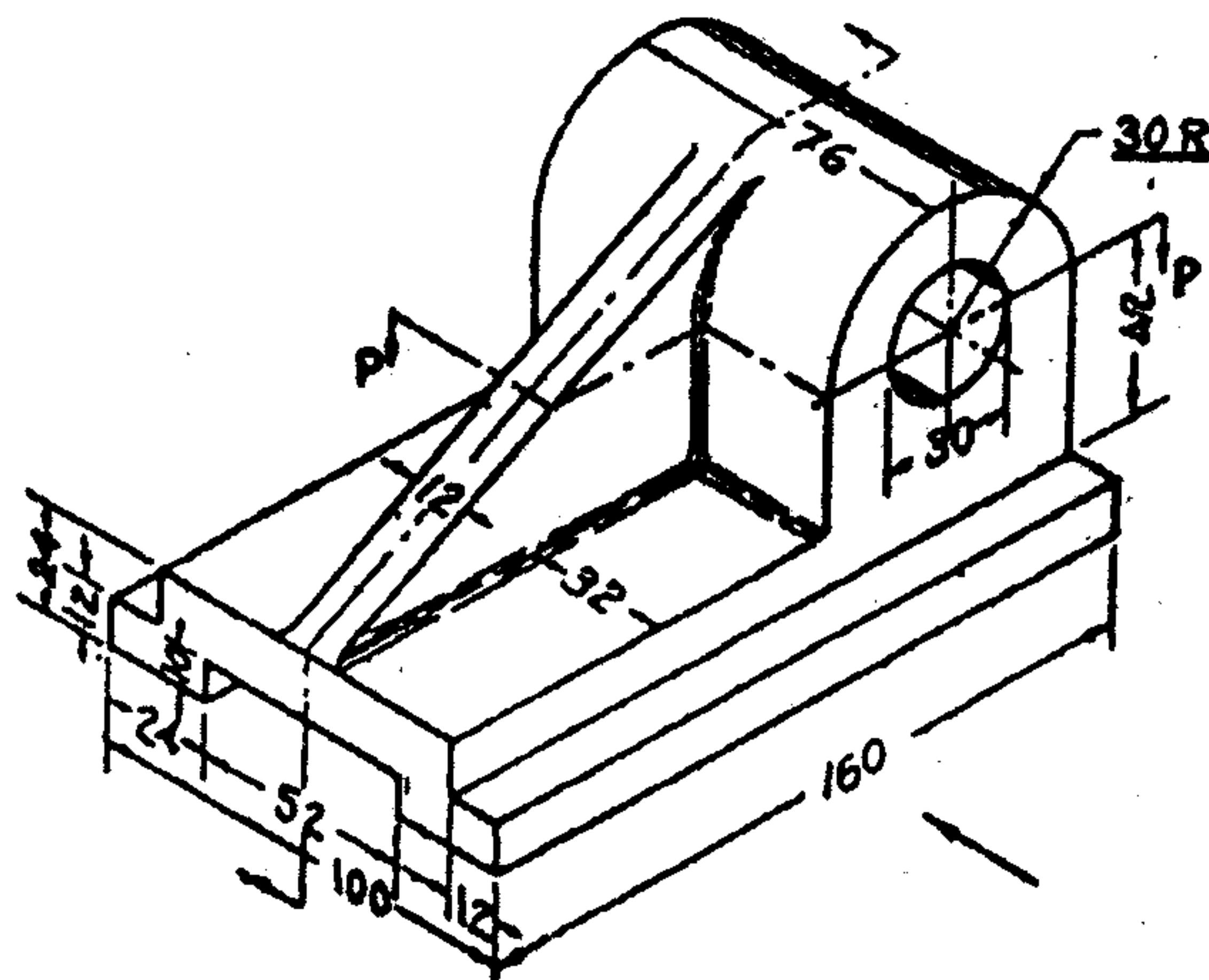
Answer ALL questions.

(5 × 20 = 100)

1. (a) Draw the hyperbola with the distance between its focus and directrix equal to 75 mm and the eccentricity equal to 1.5. Draw a normal and a tangent to the curve at a point P on the curve, 65 mm from the face.

Or

- (b) Draw by freehand the front view, top view and side view of the object shown below :



2. (a) A straight line AB has its end point A 15 mm in front of V.P. while the other end B is 50 mm in front of V.P. The plan view of the line is 50 mm long and the HT of the line is 10 mm in front of V.P. Draw the projection of the line if it is inclined at  $30^\circ$  to the H.P. Also find its VT.

Or

- (b) A rhombus ABCD has its diagonal AC = 50 mm and BD = 80 mm. The side AB of the plane is in the H.P. The side BC is in the V.P and the plane makes an angle  $30^\circ$  with the H.P. Obtain the projections of the plane and find its inclination with the V.P.
3. (a) A cone of 50 mm dia and height 70 mm is lying on one of its generators on the H.P. The vertical plane passing through the generator and the axis is inclined at  $45^\circ$  with V.P. Draw its projection.

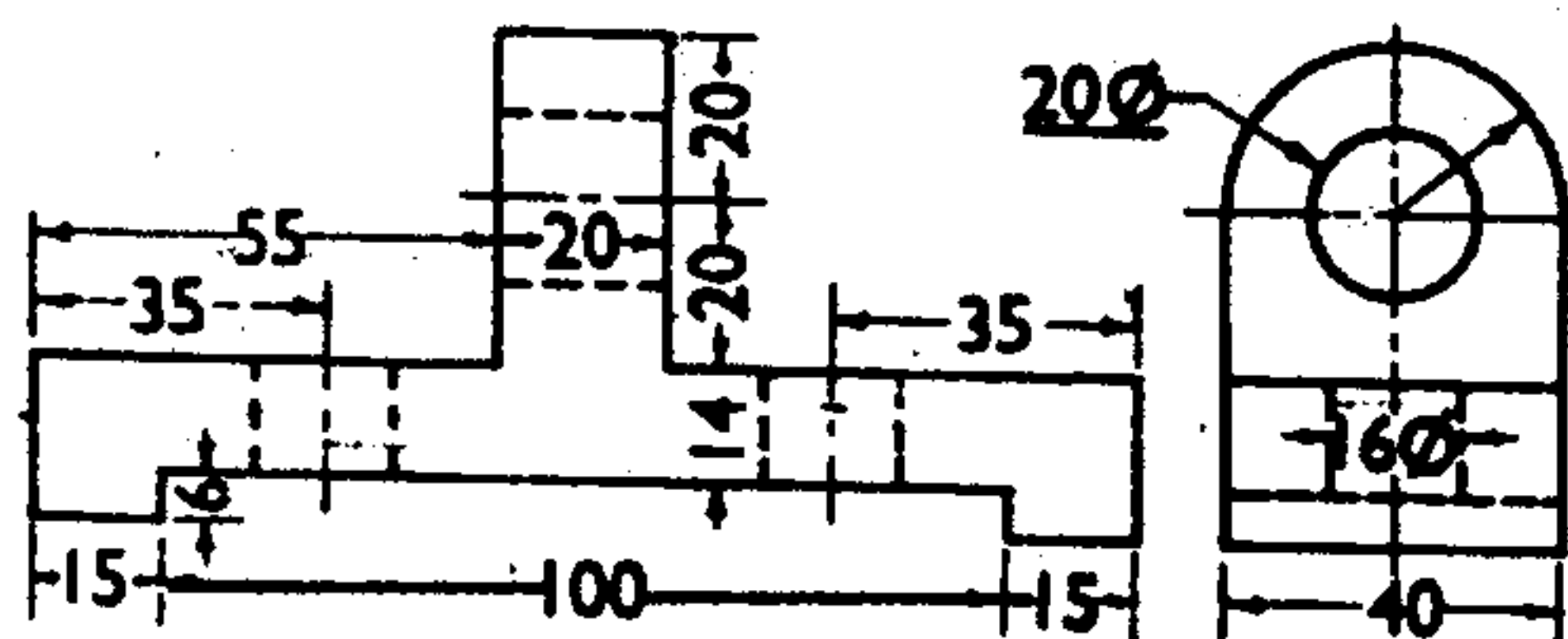
Or

- (b) A pentagonal pyramid side of base 30mm and height 70 mm has one of its triangular faces perpendicular to the H.P. and inclined at  $45^\circ$  to the V.P. Draw its projections.
4. (a) A square prism of base 50 mm and height 100 mm stands with its base on the H.P. such that all the rectangular faces are equally inclined to the V.P. It is cut by a section plane perpendicular to V.P. such that the true shape of the section is a rhombus of longer diagonal 90 mm;. Find the inclination of the section plane with the H.P. and draw the section top view and the true shape of the section.

Or

- (b) A cylinder of diameter 50 mm and length of the axis 65 mm rest on its base with the axis perpendicular to the H.P. It is cut by the cutting plane perpendicular to the V.P. inclined at  $45^\circ$  to the H.P. and passing through a point on axis 25 mm from the top. Draw the front View, the section top view and the development of the lateral surface of the cylinder.

5. (a) Draw the isometric view of the solid shown below :



Or

- (b) A cube of 30 mm edges is lying on one of its face on the ground plane with a vertical edge touching the picture plane for the perspective view (PP) and all the vertical faces equally inclined at  $45^\circ$  to the PP. The station point is 70 mm above the ground plane and 50 mm in front of the PP. The Central plane is 10 mm to the left of the centre of the cube. Draw the perspective projection of the cube.