Question Paper Code : 54018

B.E./B.Tech. DEGREE EXAMINATION, JANUARY 2018
First Semester
Civil Engineering
GE 8152 – ENGINEERING GRAPHICS
(Common to All Branches)
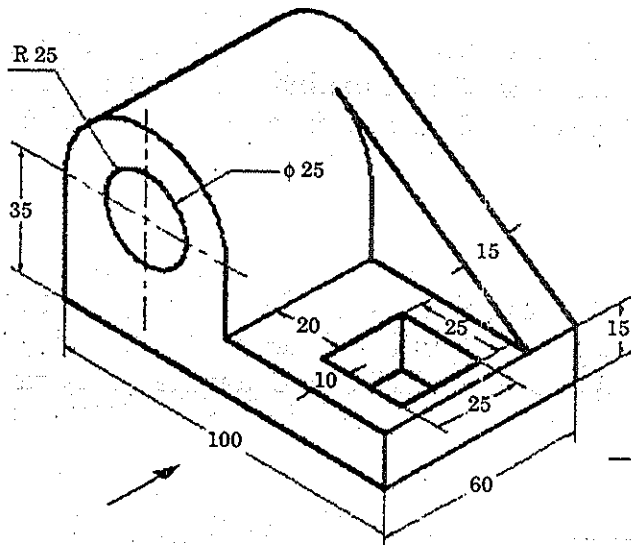#### (Regulations 2017)

Time : Three Hours

Maximum : 100 Marks

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

1. a) Construct a hyperbola when the distance between the focus and directrix is 40 mm, the eccentricity is 4/3. Also draw tangent and normal to the curve from any point on it.

(OR)

b) Draw the elevation, top and side view for the component given below.

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

(OR)

   b) The point A of a line AB is in HP and 60 mm in front of VP. The point B is in VP and 40 mm above HP. The distance between projectors is 70 mm. Draw the projections of the line, find the true length, inclinations and locate its traces.

3. a) A cone of base diameter 50 mm and axis 60 mm has one of its generators in the VP. Draw its projections when the apex is 35 mm above the HP.

(OR)

   b) A cylinder of diameter 30 mm and axis length 50 mm is resting on the HP on a point so that its axis is inclined at 45° to the HP and parallel to VP. Draw its top and front views.

4. a) A pentagonal pyramid side of base 30 mm and axis 90 mm long is resting on its base with one of its base edges parallel, nearer and 15 mm away from the VP. It is cut by a plane perpendicular to HP, inclined at 40 degrees to VP and 10 mm away from the axis. Draw the views and also obtain the true shape of the section.

(OR)

   b) A conical shape vertical chimney of 60 m base diameter joins a roof sloping at an angle of 35° with the horizontal. The shortest portion over the roof is 25 m. Determine the shape of the sheet metal from which the chimney can be fabricated. Take appropriate scale.

5. a) Draw the perspective view of a square prism of base side 20 mm and height 35 mm resting on an end on the ground with a rectangular face parallel to the picture plane. The axis of the prism is 25 mm behind the picture plane and 25 mm to the right of the eye. The eye is 50 mm in front of the PP and 50 mm above the ground.

(OR)

   b) A pentagonal pyramid with edge of base 40 mm and axis 70 mm long, is resting on its base on H.P. One of the base edges of the pyramid is perpendicular to V.P. A section plane, perpendicular to V.P. and inclined to H.P. at 30°, passes through the axis, at a height of 30 mm from the base. Draw the isometric view of the truncated pyramid.