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**B.E./B.Tech. DEGREE EXAMINATIONS Nov/Dec 2016**

**I – Semester**

**Common to ALL Branches of Engineering**

**GE8152- Engineering Graphics**

**Duration: 3-Hours** **Max. Marks: 100**

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

**(5 X 20 = 100 marks)**

1 a) For the object shown in Fig. 1a, draw free hand sketching of i) front view ii) top view and iii) right hand side view (20)

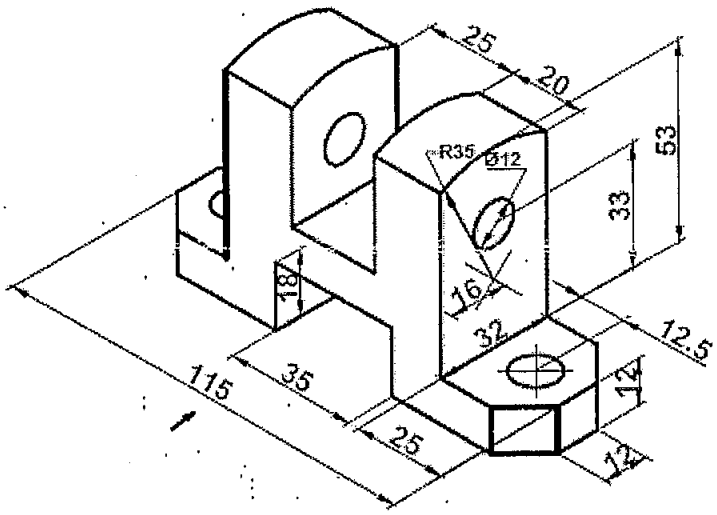


**Fig. 1a**

**Note: All dimensions are in 'mm'**

**[OR]**

1.b) Construct an ellipse, with distance of the focus from the directrix as 50 mm and eccentricity as 2/3. Also, draw normal and tangent to the curve at a point 40 mm from the directrix. (20)

2 a) A line **AB** of length 65 mm is inclined at 30° to HP, the end **A** being 30 mm above HP and 25 mm in front of VP. The line joining the front view of the end **A** and **h'** is 35 mm. Draw the projections of the line and locate the traces and also find the inclination of the line with VP. (20)

**[OR]**

2 b) A regular circular lamina of 60 mm diameter rests on HP such that the surface of the lamina is inclined at 30° HP. Obtain its projection when the diameter passing through the point on HP makes 30 ° to VP. (20)

3 a) A rectangular prism 50 x 25 mm base and length 70 mm, rests with one of its longer edges of the base on HP and the axis is inclined at 30° to HP and parallel to VP. Draw its projections. (20)

**[OR]**

3 b) A pentagonal pyramid of base edges 30 mm and axis 70 mm long has a corner of base on HP. Draw its projections when the slant edge through corner lies on HP and is parallel to VP. (20)

4 a) A right square pyramid of 30 mm side square base and axis 70 mm long has its square end on VP such that its sides are equally inclined to HP. An inclined section plane, perpendicular to VP & inclined at 40° to HP cuts the pyramid at a distance of 7.5 mm from the axis. Draw the sectional top view & the true shape of the section if the larger portion of the solid is retained. (20)

**[OR]**

4 b) A sheet metal cone assembly with a circular base of 60 mm diameter and height 70 mm long is having a circular opening of 30 mm diameter on its lateral curved surface. The center of the hole lies on the axis of the cone and 23 mm from its base. Draw the development of lateral surface of the sheet metal assembly with the hole. (20)

5 a) Draw the **isometric view** of a pentagonal prism of 22 mm base edges and axis 50 mm long when it has one of its rectangular faces on HP and axis perpendicular to the VP. (20)

**[OR]**

5 b) A rectangular pyramid of sides of base 30mm and 20 mm and height 40 mm rests with its base on the ground such that one of the longer base edges is parallel to the picture plane and 15 mm **behind** it. The observer is 50 mm in front of the picture plane, 25 mm to the left of the axis of the Pyramid and 50 mm above the ground. Draw the perspective view of the pyramid. (20)