

6/5/19

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B.E / B.Tech (FT) END SEMESTER EXAMINATIONS – APR / MAY 2019

COMPUTER SCIENCE AND ENGINEERING

Semester II

GE6251 – Engineering Graphics

(Regulation 2018 - RUSA)

Time: 3 Hours

Answer ALL Questions (5 X 20 = 100 Marks)

Max. Marks 100

1. a) Construct a conic with eccentricity $2/3$ when the distance between focus and directrix is 50 mm. Draw a tangent and normal from any point on the curve.

(OR)

- b) Draw the front view, top view and side view of the object shown in figure 1.b.

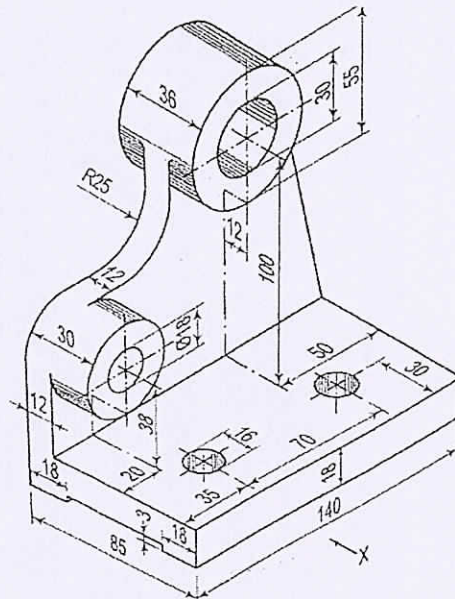


Figure 1.b

2. a) Find graphically the length of the largest rod that can be kept inside a hollow cuboid (rectangular prism) of 60mm x 40mm x 30mm. Find the inclination of the line with respect to HP and VP. Also locate its traces.

(OR)

- b) A pentagonal lamina of 30 mm side is resting on HP on one of its sides with its surface inclined 45° to HP. Draw its projections when the side in HP make 30° with VP.
3. a) A right circular cone with 40 mm base diameter and axis length 60 mm is resting on HP on one point of the base circle. Draw the projections of the cone when the axis is inclined 45° to HP and 40° to VP.

(OR)

- b) A pentagonal prism is resting on one of its corners on its base on HP. The longer edge containing the corner is inclined at 45° to the HP. The axis of the prism makes an angle of 30° to VP. Draw the projections of the solid.
4. a) A pentagonal pyramid of base side 20 mm and altitude 55 mm rests on its base on the HP with one of the base edges being perpendicular to VP. It is cut by a plane inclined at 50° to the base. The cutting plane meets the axis at 15 mm above the base. Draw the front view, sectional top view and true shape of the section.
- (OR)
- b) A cone of 40 mm diameter and 50 mm axis is resting in one of its generator on HP such that the axis is parallel to VP. It is cut by a horizontal section plane passing through its base centre. Draw the development of the remaining portion of the cone.
5. a) A cylinder, with diameter of base 35 mm and axis 55 mm long, is resting on its base on HP. A section plane, perpendicular to VP and inclined at 45° to HP passes through the axis at a distance of 15 mm from its top end. Draw the isometric projection of the truncated cylinder.
- (OR)
- b) Draw the perspective view of pentagonal prism of base side 20 mm and height 40 mm when it rests 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 30 mm to the left of the axis.

06-05-19
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