Reg. No. :

Question Paper Code: 50708

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

First Semester

Civil Engineering

15UME108 – ENGINEERING GRAPHICS

(Common to ALL branches)

(Regulation 2015)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

(5 x 20 = 100 Marks)

1. (a) The focus of a conic is 50 mm from the directrix. Draw the locus of a point 'P' moving in such a way that its distance from the directrix is equal to its distance from the focus. Name the curve. Draw a tangent to the curve at a point 60 mm from the directrix.   (20)

Or

(b) A rectangular lamina of side 60mm x 30mm is seen as a square in the top view, when it rests on one of its edges on HP and perpendicular to VP. Draw the projections of the lamina and find the true inclination of its surface with HP. Draw the front view of the lamina when the edge about which it is tilted is inclined at 45° to VP.   (20)

2. (a) A right pentagonal pyramid side of base 30 mm and height 60 mm rest on one of its base on HP; the base being lifted up until highest corner in it is 40 mm above HP. Draw the projection when the edge on which it rests is made perpendicular to VP.   (20)

Or

(b) A square prism of side 30 mm and height 60 mm is resting on HP with one of its base edges, such that the base is inclined at 40° to the HP and parallel to VP. Draw the projections of the prism.   (20)
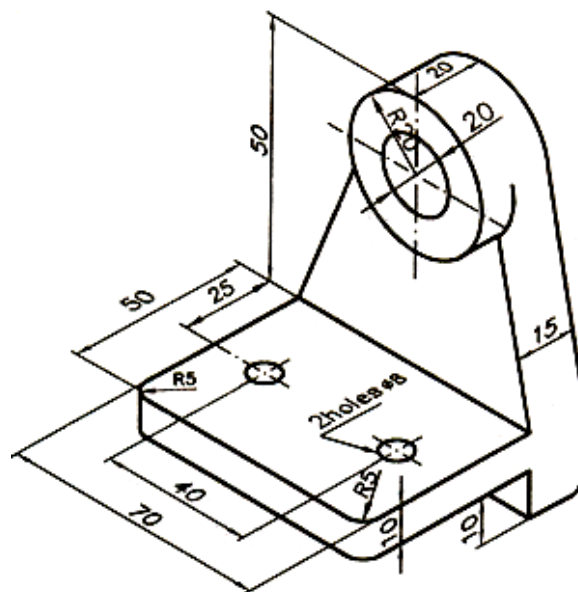
3. (a) A cube of side 40 mm is placed and cut by a plane in such a way that the true shape of the section is a regular hexagon. Draw the front and top views of the cube and determine the inclination of the plane with the HP. Show the true shape of the section. (20)

Or

(b) A hexagonal prism, edge of base 20 mm and 50 mm long, rests with its base on HP such that one of its rectangular faces is parallel to VP. It is cut by a plane perpendicular to VP inclined at 45° to HP and passing through the right corner of the top face of the prism. Draw the sectional top view and develop the lateral surface of the truncated prism. (20)

4. (a) A hexagonal prism, side of base 25 mm and height 50 mm rest on H.P and one of the edge of its base is parallel to V.P. A section plane perpendicular to V.P. and inclined at 55° to H.P. bisects the axis of the prism. Draw the isometric view of the truncated portion of the prism. Clearly showing the cut surface. (20)

Or

(b) A pentagonal pyramid 30 mm edge of base and 65 mm height stands on H.P such that an edge of the base is parallel to V.P and nearer to it. A section plane perpendicular to V.P and inclined at 30° to H.P cuts the pyramid passing through a point on the axis at a height of 35 mm from the base. Draw the isometric view of the truncated pyramid, showing the cut surface. (20)

5. (a) Draw the orthographic view (Plan, Elevation and side view) for the given figure. All Dimensions are in mm. (20)

(b) Draw the orthographic view (Plan, Elevation and side view) for the given figure. All Dimensions are in mm. (20)

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