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Question Paper Code:51708

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2019

First Semester

Civil Engineering

15UME108 – ENGINEERING GRAPHICS

(Common to ALL branches)

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (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. CO1-App (20)

Or

- (b) A line RS whose front view measures 50mm and is inclined at 40° to the reference line. One of its end R is 10mm above HP and 20mm in front of VP. The other end S is 50mm in front of VP. Draw the projections and find true length and true inclinations of the lines. CO1-App (20)

2. (a) A square pyramid of base side 30 mm, axis length 60 mm is resting on one of its base corners with its axis inclined at 50° to HP and parallel to VP. Draw its projections when the base sides containing the resting corner are equally inclined to HP. CO2-App (20)

Or

- (b) 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. CO2-App (20)

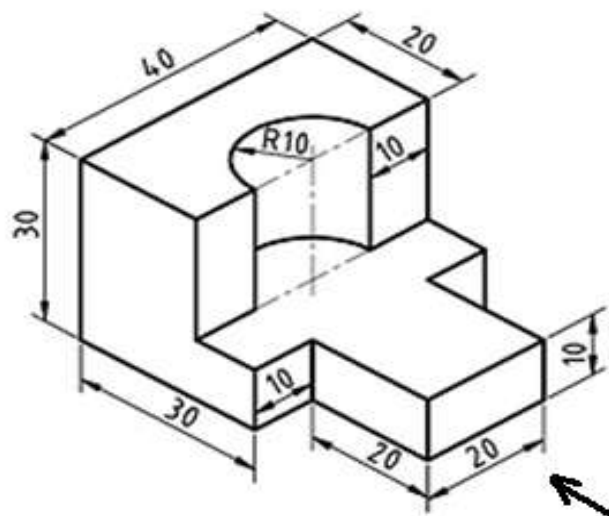
3. (a) A hexagonal prism, edge of base 20 mm and 50 mm long, rests with its base on HP such that one of its rectangular faces is parallel to VP. It is cut by a plane perpendicular to VP inclined at 45° to HP and passing through the right corner of the top face of the prism. Draw the sectional top view and develop the lateral surface of the truncated prism. CO3-App (20)

Or

- (b) A right circular cone base 30mm side and height 50mm rests on its base on HP. It is cut by a section plane perpendicular to the VP and inclined at 45° to HP and bisecting the axis. Draw the projections of the truncated cone and develop its lateral surfaces. CO3- App (20)
4. (a) 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. CO4-App (20)

Or

- (b) A frustum of a square pyramid is of bottom edge 60mm and top edge 30mm and height 60mm. Draw the isometric view of the frustum. CO4-App (20)
5. (a) Sketch the front, top and left side views of the machine component shown in below figure. CO5-App (20)



Or

- (b) Draw the front, top and right side views of the following pictorial CO5-App (20) view.

