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Question Paper Code: 51708

B.E./B.Tech. DEGREE EXAMINATION, MAY 2018

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) 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 Sis 50mm in front of VP. Draw the projections and find true length and true inclinations of the lines.   CO1- App   (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.   CO1- App   (20)

2. (a) A cone of base diameter 50mm and axis height 70mm is resting on HP on one of the points on the circumference of its base. The axis of the cone is inclined at 40° to HP and parallel to VP. Draw its projections.   CO2- App   (20)

Or

(b) A square prism of side 30 mm and height 60 mm is resting on HP   CO2- App   (20)
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.

3. (a) A hexagonal prism, edge of base 20 mm and 50 mm long, rests   CO3- App   (20)
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.

Or

(b) A cone of base diameter 50mm and axis height 70mm is resting on   CO3- App   (20)
HP on its base. A string is wound around the lateral surface of the
solid starting from left extreme point on the base and ending at the
same point. Calculate the shortest length of the string required and
also trace the path of the string in the front and top views.

4. (a) A pentagonal pyramid of base side 30 mm and axis length 65 mm is   CO4- App   (20)
resting on HP on its base with a side of base perpendicular to VP. It
is cut by a plane inclined at 30° to HP and perpendicular to VP and
passes through a point at a distance 30 mm from the apex. Draw the
isometric view of the remaining portion of the pyramid.

Or

(b) A pentagonal pyramid 30 mm edge of base and 65 mm height   CO4- App   (20)
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.

5. (a) Draw the elevation, plan and right side view of the given object.   CO5- App   (20)

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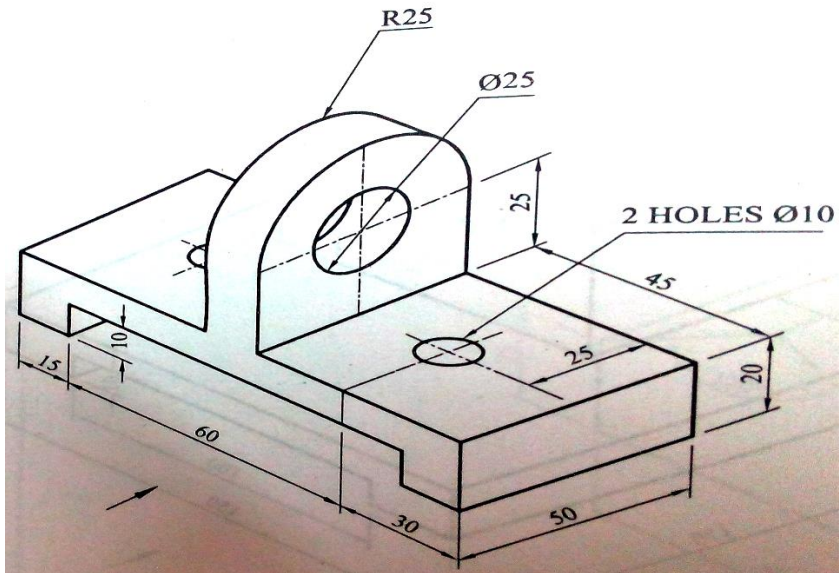
Or

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

CO5- App (20)

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