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Question Paper Code: AME001



INSTITUTE OF AERONAUTICAL ENGINEERING (Autonomous)

B.Tech I Semester End Examinations (Supplementary) - February, 2017

Regulation: IARE-R16

ENGINEERING DRAWING (Common for CE|ME|AE)

Time: 3 Hours

Max Marks: 70

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

UNIT – I

- (a) Construct a vernier scale of 1:40,000. Showing kilometers, hectometers and decameters and land enough to measure 5 km. Mark distances of 2.31 km and 3.92 km on the scale. [7M]
(b) A circle of 40 mm diameter rolls along a line for one revolution clock-wise. Draw the locus of a point on the circle, which is in contact with the line. Name the curve. [7M]
- (a) The major and minor axes of an ellipse are 120 mm and 80 mm. Draw an ellipse by Foci or arcs of circles method. [7M]
(b) Draw the involute of a regular hexagon of side 20 mm.

UNIT – II

- Draw the projections and traces of a line AB 100mm long inclined at 30° to HP and 45° to VP. One end is in HP and the other end is in VP. [14M]
- A square lamina PQRS of side 40 mm lies on HP such that the diagonal PR is inclined to HP at 30° and the diagonal QS are inclined to VP at 45° . Draw its projections. [14M]

UNIT – III

- A square pyramid of side of base 40 mm and height 70 mm is resting on one of its slant edges on HP such that the top view of the axis is inclined to VP at 30° . Draw its projection. [14M]
- A rectangular prism of side 30 mm x 50 mm and height 70 mm is resting with one of its shorter edges on HP such that the axis is inclined at 30° to HP and 60° to VP. Draw its projection. [14M]

UNIT – IV

- A hexagonal prism of side of base 30 mm and axis 75 mm long, is resting on its base on HP such that a rectangular face is parallel to VP. It is cut by a section plane, perpendicular to VP and inclined at 30° to HP. The section plane is passing through the top end of an extreme lateral edge of the prism. Draw the development of the lateral surface of the cut prism. [14M]
- A rectangular pyramid of base 40 mm x 25 mm and height 50 mm is placed centrally on a cylindrical slab of diameter 100 mm and thickness 70 mm. Draw the isometric projections of the combination. [14M]

UNIT – V

9. Convert the isometric projection of the given figure 1 into orthographic projections by drawing the front view, top view and side view. (All dimensions are in mm) [14M]

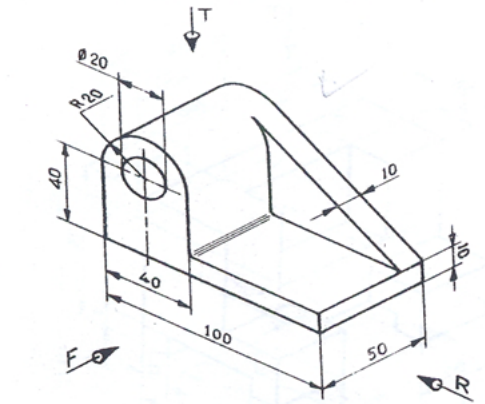


Figure 1

10. Convert the isometric projection of the given figure 2 into orthographic projections by drawing the front view, top view and side view. (All dimensions are in mm) [14M]

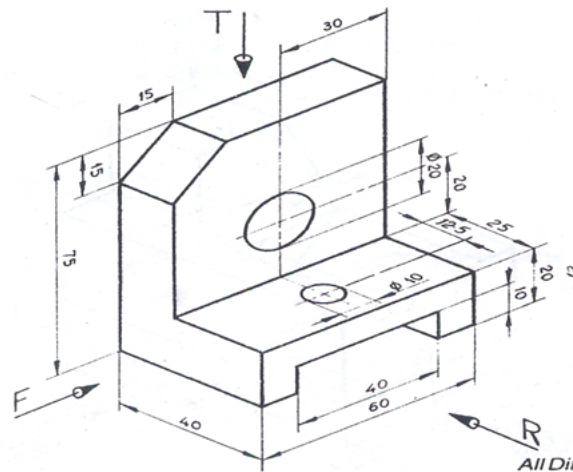


Figure 2