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Question Paper Code : 42377

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2010.

First Semester

Civil Engineering

GE 1101 — ENGINEERING GRAPHICS

(Common to all branches of B.E./B.Tech. except Marine Engineering)

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer all FIVE questions in A3 size drawing sheet book provided.

Use appropriate scale if necessary, to fit the solution within A3 size.

Answer ALL questions.

(5 × 20 = 100)

1. (a) The top view of a line AB has points a and b , 10 mm and 50 mm below the xy line and the front view has points a' and b' 40 mm and 15 mm above the xy line respectively. Determine the true length and inclinations of the line with HP and VP. Take the distance between the end projectors as 70 mm.

Or

- (b) A circular lamina of 60 mm diameter is kept 35° inclined to HP and perpendicular to VP, so that the centre of the lamina is 40 mm in front of VP and the lowest of the circular edge is 15 mm above HP. Draw projections of the lamina.
2. (a) A hexagonal prism of base side 25 mm and height 60 mm rests with one of its rectangular faces on HP. If the axis is inclined at 35° to VP, draw its projections.

Or

- (b) A regular pentagonal pyramid has an altitude of 65 mm and base side 30 mm. The pyramid rests with one of its sides of the base on HP such that the triangular face containing that side is perpendicular to both HP and VP. Draw its projections.

3. (a) A cylinder is resting on its base upon HP. It is cut by a plane inclined at 45° to HP, cutting the axis at a point 15 mm from the top. If the diameter of the cylinder is 45 mm and height is 60 mm, draw the projections of the sectioned cylinder and the true shape of section.

Or

- (b) A right circular cone, 70 mm base and 70 mm height, rests on its base on the ground plane. A section plane perpendicular to VP and inclined at 35° to HP cuts the cone, bisecting its axis. Draw the development of the lateral surface of the cone.
4. (a) A sphere of 20 mm radius is placed centrally over a hexagonal slab of side length 25 mm and thickness 20 mm. Draw isometric view of the combination.

Or

- (b) A hexagonal prism of base side 20 mm and axis length 50 mm rests on the ground plane on one of its rectangular faces with its axis inclined at 35° to the picture plane. A corner of the base is touching the PP. The station point is 60 mm in front of the PP and lies in a central plane that bisects the axis. The station point is 45 mm above the ground plane. Draw the perspective view of the prism.
5. (a) Draw freehand the front view, top view and side view of the object shown in Fig. 1 Add by freehand the necessary dimensions.

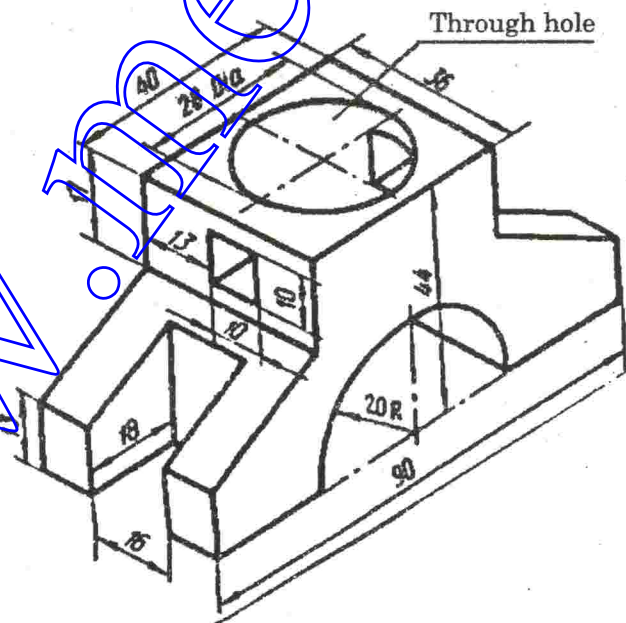


Fig. 1

Or

- (b) Draw freehand the front view, top view and side view of the object shown in Fig. 2. Add by freehand the necessary dimensions.

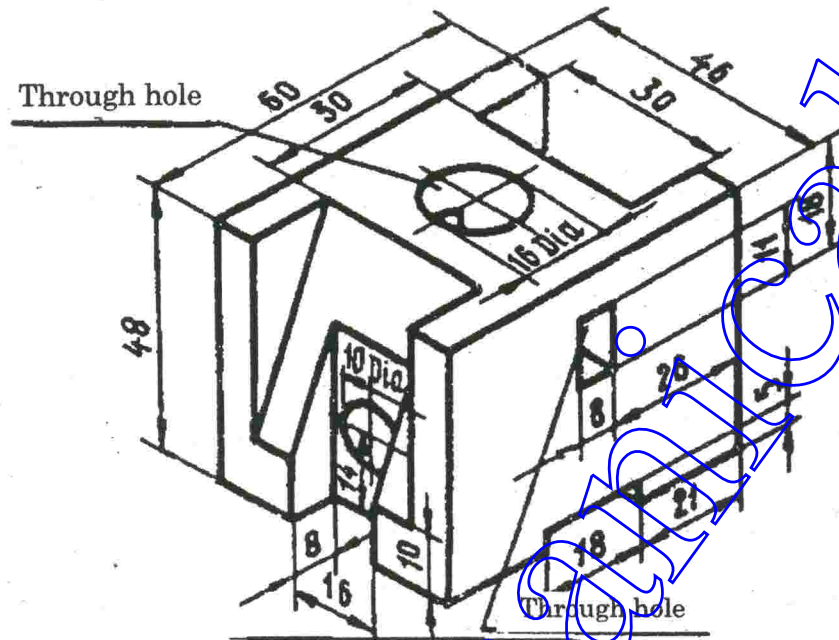


Fig. 2