

D 158

B.E./B.Tech. DEGREE EXAMINATION, JANUARY 2006.

First Semester

GE 1101 — ENGINEERING GRAPHICS

(Common to all Branches of Engineering and Technology)

(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.

(5 × 20 = 100)

1. A right pentagonal pyramid of base side 20 mm and altitude 60 mm rests on one of its edges of the base in H.P; the base being lifted up until the highest corner in it is 20 mm above H.P. Draw the projection of the pyramid when the edge on which it rests is made perpendicular to V.P.
2. (a) A line AB 60 mm long has its end B 20 mm above the H.P. and 25 mm in front of V.P. The end A is 50 mm above H.P. and 50 mm in front of V.P. Draw its projections and find its inclinations with V.P. and H.P.

Or

- (b) A circular lamina diameter 50 mm lies in a plane inclined at 40° to V.P. and perpendicular to H.P. Draw its front view and top view.
3. (a) A hexagonal pyramid of base 30 mm and axis 70 mm lies on H.P. on its base edge such that one of the slant faces is perpendicular to both the planes. Draw its projections. When it is cut by section plane parallel to H.P. and a distance of 15 mm from apex point.

Or

- (b) A cone of base diameter 50 mm, axis height 70 mm is lying on H.P. on one of its base point with its axis inclined at 40° to H.P. and parallel to V.P. Draw the projection.

4. (a) A cylindrical slab of 75 mm diameter and 45 mm thick is surmounted by a cube of 38 mm side. On the top of the cube rests a square pyramid of altitude of 38 mm and side of base 25 mm. The axes of the solids are in the same straight line. Draw the isometric view of the setup.

Or

- (b) Draw the perspective view of a triangular prism side of base 30 mm and height 50 mm. The prism stands vertically with a base edge receding at 45° from P.P. The nearest vertical edge is 20 mm behind P.P and the station point is 100 mm from P.P and 70 mm above the ground plane and 20 mm to the left of the nearest vertical edge.
5. (a) A vertical cylinder 40 mm dia and height 60 mm is drilled to produce a hole of diameter 30 mm such that the axis of the hole is perpendicular to V.P. and parallel to H.P. Draw the lateral surface development of the solid.

Or

- (b) Sketch by free hand, the following views of the given object shown in Figure 5 (b). The dimensioning is also to be made by free hand.
- (i) The front view in the direction of the arrow. (10)
- (ii) The top view. (5)
- (iii) The side view, as viewed from the side available for viewing. (5)

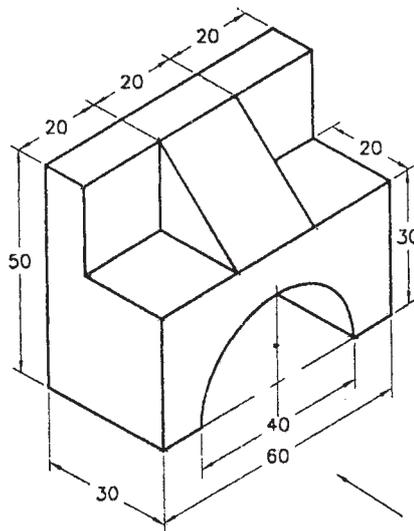


Fig. 5 (b)