

SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING/  
TECHNOLOGY—OCTOBER, 2011

ENGINEERING GRAPHICS  
(Common—except DCP and CABM)

[Time : 3 hours

(Maximum marks : 100)

- [Instructions to the candidate : 1. A<sub>2</sub> size drawing sheet is to be used.  
2. All drawings should be in first angle projection.  
3. Both sides of the drawing sheets can be used.  
4. Dimensioning as per BIS.  
5. Sketch accompanied.]

## PART—A

(Answer the following questions in one or two sentences.  
Each question carries 2 marks)

- |  |          |
|--|----------|
|  | Marks    |
| 1 (a) How drawing sheets are designated as per BIS ?                                   |          |
| (b) Distinguish between projection and projector.                                      |          |
| (c) Define reference line and how this line is represented in orthographic projection. |          |
| (d) What are the important full sectional views of an object ?                         |          |
| (e) What are the commonly used pictorial drawings ?                                    | (5×2=10) |

## PART—B

(Answer any five questions. Each question carries 10 marks.)

- II Read the dimensioned drawing shown in figure 1. Redraw the figure and dimension it as per BIS.
- III Draw an involute of a circle 50 mm in diameter.
- IV Draw the projections of the following points on a common x-y line keeping the distance between the projections as 30 mm :
- Point A is 30 mm behind VP and 20 mm below HP.
  - Point B in HP and 30 mm in front of VP.
  - Point C is 25 mm behind VP and 15 mm above HP.
  - Point D is 20 mm below HP and 25 mm in front of VP.
  - Point E is 35 mm in front of VP and 25 mm above HP.

- V Draw the projections of a line AB, 80 mm long inclined at  $30^\circ$  to HP and parallel to VP. The line is 40 mm in front of VP. The lower end A, is 20 mm above HP.
- VI Pictorial drawing of an object is shown in figure 2. Draw the following free hand sketches and show the dimensions as per BIS :
- Front view in the direction of arrow FV.
  - Top view
  - Right side view.
- VII Figure 3 shows isometric view of a machine block having a sloping surface. Draw the front view, top view and an auxiliary view of the inclined surface. Do not dimension the views.
- VIII A cylinder of diameter 40 mm and height 75 mm rests on lateral surface on HP such that its axis is perpendicular to VP. Draw the oblique projection of the cylinder by cabinet method when the receding axis is inclined at  $30^\circ$ . (5×10=50)

## PART—C

(Answer any two questions. Each question carries 20 marks)

- IX The pictorial drawing of a support is given in Figure 4. Draw :
- Front view in the direction of the arrow F.
  - Top view in the direction of arrow T.
  - Right side view.
- X Figure 5 shows pictorial view of a shaft bearing. Draw the following views :
- Sectional front view in the direction of the arrow F.
  - Top view ; and
  - Right side view.
- XI Orthographic views of a stepped block with sloping surface given in Figure 6. Draw the isometric drawing of the block. (2×20=40)

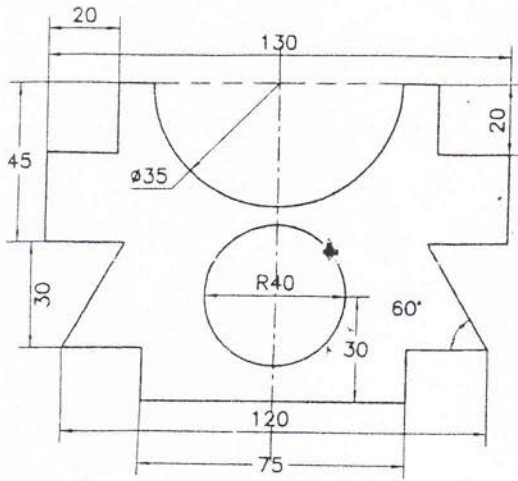


FIG-1

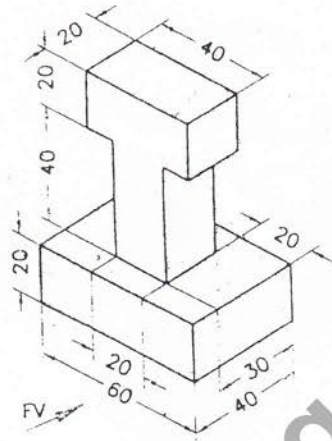


FIG-2

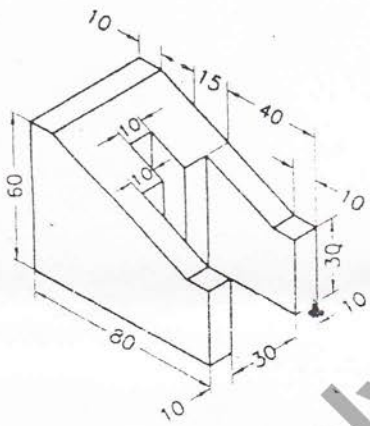


FIG-3

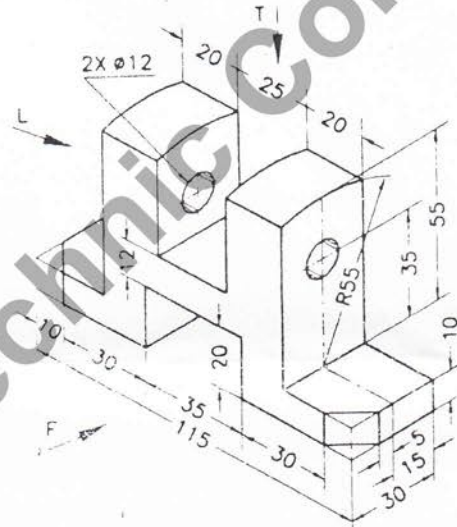


FIG-4

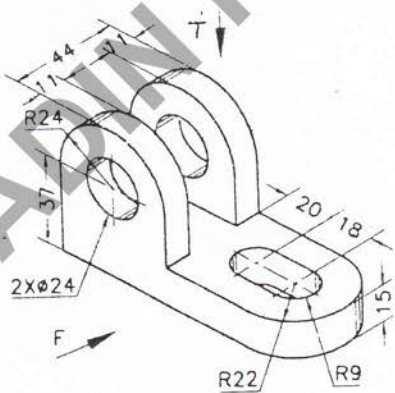


FIG-5

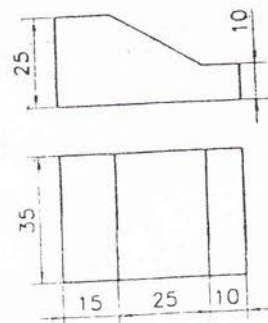


FIG-6