

Roll No.

Total Pages : 3

BT-2/M-20

32038

ENGINEERING GRAPHICS AND DRAWING

Paper : ES-109A

(Group-II)

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt a total of *five* questions by selecting at least *one* question from each unit.

UNIT-I

1. (a) Describe the significance of Engg. Drawing.
(b) Explain the construction of Diagonal scale with suitable example. 15
2. (a) Discuss the general methods for generating ellipse.
(b) Define the following :
(i) Cycloid.
(ii) Involute. 15

UNIT-II

3. Draw the projections of the following points on a common reference line keeping the distance between their projectors 30 mm apart :
(a) Point P is 35 mm below the H.P. and in the V.P.
(b) Point Q is 40 mm in front of the V.P. and 25 mm below the H.P.

- (c) Point R is 45 mm above the H.P. and 20 mm behind the V.P.
- (d) Point S is 30 mm below the H.P. and 45 mm behind the V.P.
- (e) Point T is both in H.P. and V.P. 15
4. A straight line PQ has its end P 20 mm above H.P. and 30 mm in front of the V.P. and the end Q is 80 mm above H.P. and 70 mm in front of V.P. If the end projectors are 60 mm apart, draw the projections of the line. Determine its true length and true inclination with the reference plane. 15

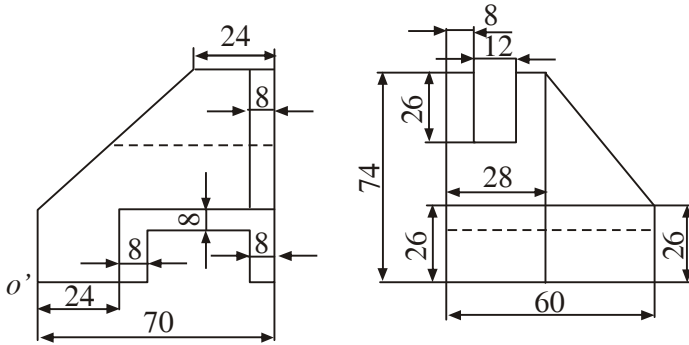
UNIT-III

5. A pentagonal pyramid of base side 30 mm and axis 60 mm is resting on its base in the H.P. with an edge of the base parallel to the V.P. A horizontal section plane cuts the pyramid bisecting the axis. Draw its front view and top sectional top view. 15
6. A cylinder of base diameter 50 mm and axis 70 mm is resting on ground with its axis vertical. It is cut by a section plane perpendicular to the V.P. inclined at 45° to the H.P., passing through the top of a generator and cuts all the other generators. Draw the development of its lateral surface. 15

UNIT-IV

7. (a) Describe the construction of an isometric scale.
- (b) Explain the principles of isometric projection. 15

8. Fig. 1 shows two views of an object. Draw isometric view of the object. 15



All dimensions are in mm.

Fig. 1