

**DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/
MANAGEMENT/COMMERCIAL PRACTICE, NOVEMBER - 2024**

ENGINEERING GRAPHICS

[Maximum Marks: 100]

[Time: 3 Hours]

- [Note: -1. A2 size drawing sheet to be supplied.
2. First angle projection is to be followed.
3. Dimensions should be as per BIS.
4. Both sides of the drawing sheet can be used.
5. Sketches on the next page.
6. Any missing data can be suitably assumed.]

PART-A

[Maximum Marks: 10]

I. (Answer *all* questions in one or two sentences. Each question carries 2 marks)

1. Write the name of any two types of lines used in engineering drawings.
2. Draw any two methods to indicate the dimension of radius on an arc.
3. Define eccentricity of conic section.
4. Explain development of surface and pattern.
5. Write any four commands used in Auto CAD.

(5 x 2 = 10)

PART-B

[Maximum Marks: 50]

II. (Answer *any five* of the following questions. Each question carries 10 marks)

1. Redraw the **figure-1** and dimension it as per BIS.
2. Inscribe a regular heptagon of side 20mm.
3. Draw a plain scale of 1cm = 5m meters and show on it 37 meters.
4. Draw the projections of the following points. Take the distance between projectors as 30mm.
 - i. P in HP and 35 mm in front of V.P
 - ii. Q in H.P and 35 mm behind V.P
 - iii. R in both H.P and V.P.
 - iv. S in V.P and 30mm above H.P.
 - v. T in V.P and 30 mm below H.P.
5. A line AB 65mm long has its end A 20mm above HP and 25mm in front of VP. The end B is 40mm above HP and 65mm in front of VP. Draw the projections of AB and show the inclination with HP and VP. Measure the lengths of top and front views.

6. A square prism of base side 35 mm and height 70 mm rests on one of its end faces on the H.P. It is cut by a plane perpendicular to the V.P and inclined to the H.P at 45° and bisects the axis. Draw the development of all the lateral surfaces of the lower portion of the prism.
7. Draw the complete development of an elbow shown in **figure - 2**. (5 x 10 = 50)

PART-C

[Maximum Marks: 40]

(Answer *any two* of the following questions. Each question carries 20 marks)

- III. Isometric view of an object is shown in **figure - 3**. Draw its front view, top view and left side view.
- IV. Front and side views of a block are shown in **figure - 4**. Draw the cavalier oblique drawing. Take receding angle at 45° to the horizontal, sloping upwards and to right.
- V. Draw the development of a bucket shown in **figure - 5**.

(2 x 20=40)

Figure – 1

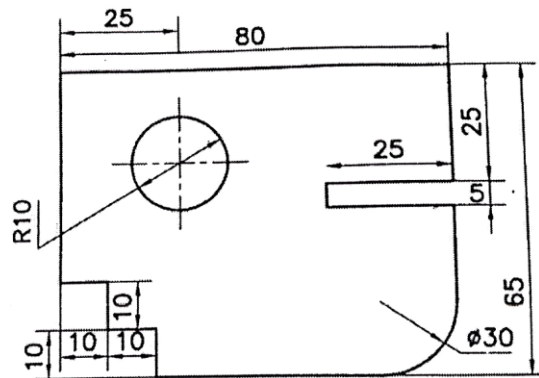


Figure – 2

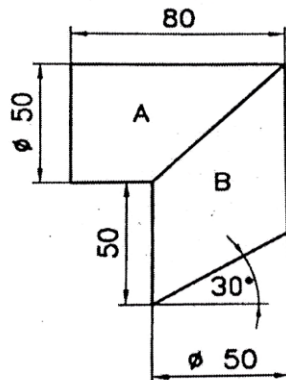


Figure - 3

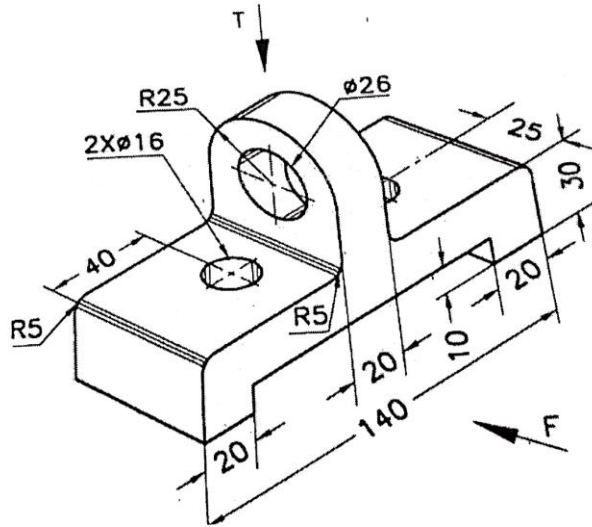


Figure - 4

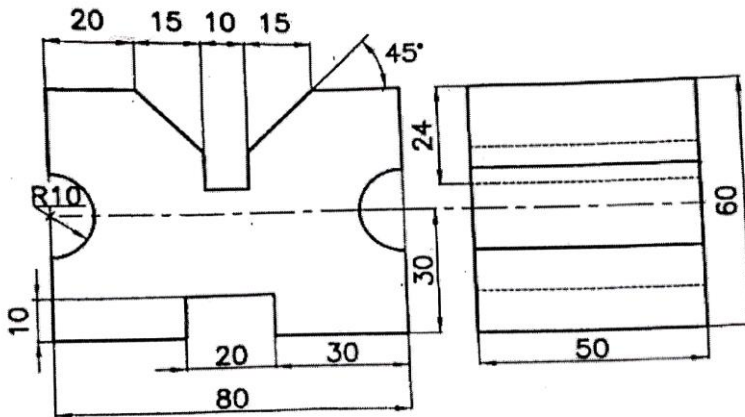


Figure - 5

