[Total No. of Questions - 9] [Total No. of Printed Pages - 3]

Dec.-23-0356

ME-102 (Engineering Drawing & Graphics)

B.Tech. 2nd (CBCS)

Time : 3 Hours **Max. Marks : 40**

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all selecting one question each from Section A, B, C and D. Section E is compulsory.

SECTION - A

1. Define Engineering Drawing and write down the name of different drawing instruments used in Engineering Drawing and discuss types of lines in detail. (8)

2. A line PQ, 90 mm long, makes an angle of 30° with the H.P. and 45° with the V.P. Its end P is 25 mm in front of the V.P. Its other end Q is 30 mm above H.P. Find its projection angles. (8)

SECTION - B

3. Draw the projections of a square pyramid having one of its triangular faces in the V.P. and the axis parallel to and 40 mm above the H.P. Base 30 mm side; axis 75 mm long. (8)

4. A cone, base 75 mm diameter and axis 75 mm long, has its axis parallel to the V.P. and inclined at 45° to the H.P. A horizontal section plane cuts the cone through the mid-point of the axis. Draw the front view. (8)

SECTION - C

5. The orthographic projections of the object are shown in Figure 1. Draw the isometric view of the object. (8)

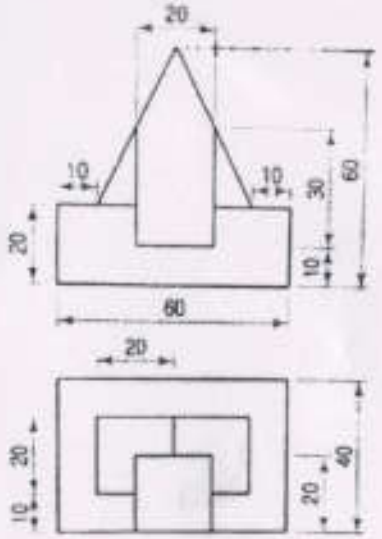

Figure 1

6. Explain Isometric projection and discuss isometric axes, lines, planes and scale with proper explanation and figures. (8)

SECTION - D

7. Draw the development of the lateral surface of the truncated cone shown Figure 2. (8)

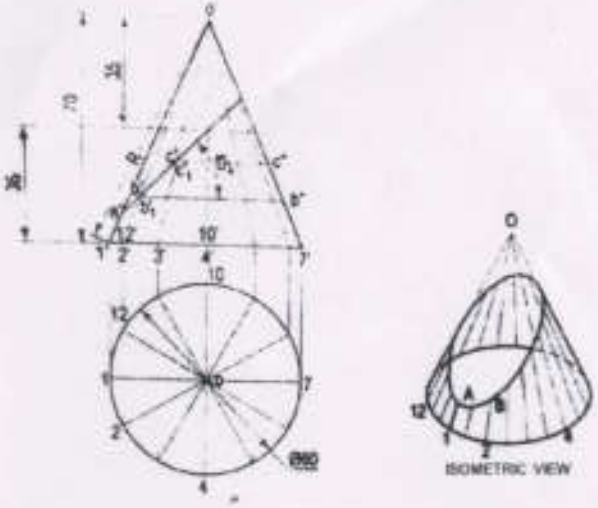

Figure 2

[P.T.O.]

8. A vertical square prism, base 50 mm side, is completely penetrated by a horizontal square prism, base 35 mm side, so that their axes intersect. The axis of the horizontal prism is parallel to the V.P., while the faces of the two prisms are equally inclined to the V.P. Draw the projections of the solids, showing lines of intersection. (Assume the length of prisms). (8)

SECTION - E (Compulsory)

9. (a) Discuss construction of cycloids.

   (b) What is meant by scale in Engineering Drawing?

   (c) Explain principle of projection.

   (d) What are the standard sizes of drawing sheets according to I.S.I, and which is suitable for drawing work? (4×2=8)