8. A vertical square prism, base 40 mm side is completely penetrated by a horizontal square prism, base 30 mm side so that their axes are 6 mm apart. The axis of the horizontal prism is parallel to the V.P., while the faces of both prisms are equally inclined to the V.P. Draw the projections of the prisms showing lines of intersection. **8**

**(Compulsory Question)**

9. (a) State the advantages of Vernier scale.

   (b) Define a cyloid curve.

   (c) State the advantages of Isometric projection.

   (d) What do you mean by development of surfaces ?

   (e) What do you mean by orthographic projection ?

   (f) What do you mean by "Third angle projection" ?

   (g) State the characteristic features of isomertic projection.

   (h) What is "representative fraction" in scale.

   **1×8=8**

## July-22-00212

### B. Tech. EXAMINATION, 2022

Semester II (CBCS)

ENGINEERING DRAWING & GRAPHICS

ME-102

*Time : 3 Hours*      *Maximum 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 from each Sections A, B, C and D. Q. No. **9** is compulsory.

**Section A**

1. In a map, a 36 km distance is shown by a line 45 cms long. Calculate the R.F. and construct a plain scale to read kilometers and hectometers, for max. 12 km. Show a distance of 8.3 km on it. **8**

2. With neat sketch define (a) Auxiliary plane, (b) Inclination of a line, (c) Traces of a line.

A line AB, 50 mm long, is inclined at 45° to the VP and parallel to the HP. The nearest end of the line is 25 mm in front of the VP. Draw the projections of the line if it is 40 mm above the HP.    8

## Section B

3. A pentagonal pyramid base 25 mm side and axis 50 mm long has one of its triangular faces in the VP and the edge of the base contained by that face makes an angle of 30° with the HP. Draw its projections.    8

4. A tetrahedron of 50 mm long edges is resting on one edge on Hp while one triangular face containing this edge is vertical and 45° inclined to VP. Draw projections.    8

## Section C

5. Briefly explain the concept of isometric projection. Draw isometric view of a hexagonal prism having a base with 40 mm side and a 75 mm long axis resting on its base on the HP with an edge of the base parallel to the VP.    8

6. A hexagonal prism having the side of base 26 mm and the height of 60 mm is resting on one of the corner of the base and its axis is inclined to 30° to the H.P. Draw its projections and also prepare the isometric view of the prism.    8

## Section D

7. Draw the development of the lateral surface of the part P of the square pyramid shown in figure below :    8



ISOMETRIC VIEW