Roll No.:.....

National Institute of Technology, Delhi

Name of the Examination: B. Tech. / M. Tech. / Ph.D.

Branch	: ECE	**Semester**	: II
Title of the Course	: Engineering Visualisation	**Course Code**	: MEB 100

Time: 3 Hours **Maximum Marks: 50**

Note: In case of any assumption or correction, clearly mention it.

Section A (01×10 = 10 marks)

Solve following ten questions and all questions are compulsory.

1. What are different methods of orthographic projection.
2. Draw symbol of third angle projection.
3. Explain the relationship between an orthographic projection and a multiview drawing.
4. What are three types of flat surfaces.
5. What is plane scale.
6. What is orthographic projection.
7. What are different sizes of sheet with dimensions.
8. What are different types of lines.
9. Mention those countries which follow the first angle projection system.
10. What do you understand by engineering visulisation.

Section B

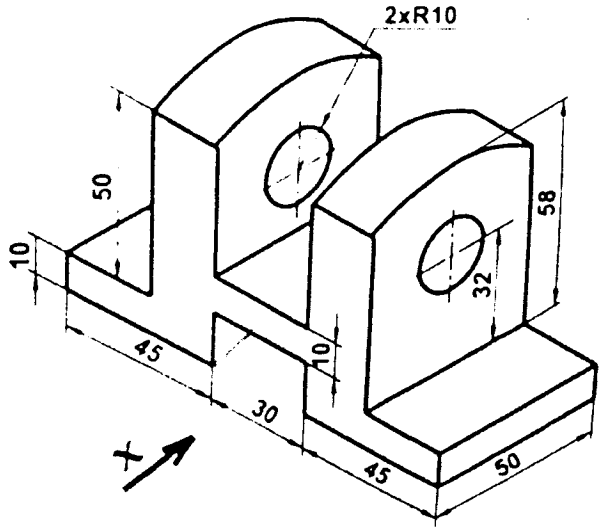
Solve any four questions. (04×05 = 20 marks)

1. A motor car is running at a speed of 60 kph. On a scale of RF = 1 / 4,00,000 show the distance traveled by car in 47 minutes.
2. Draw a vernier scale of RF 1 / 25 to read centimeters upto 4 meters and on it, show lengths 2.39 m and 0.91 m.
3. A line AB, 70mm long, has its end A 15mm above HP and 20mm in front of VP. It is inclined at 30° to HP and 45°to VP. Draw its projections and mark its traces.
4. Fv of line AB is 50° inclined to xy and measures 55 mm long while it's Tv is 60° inclined to xy line. If end A is 10 mm above Hp and 15 mm in front of Vp, draw it's projections,find TL, inclinations of line with Hp & Vp.
5. What are the methods of dimensioning explain with examples.

Section C

Solve any two questions. (02×10 = 20 marks)

1. Draw the orthographic projections (front view, top view and side view) of the following figure. All dimensions are in mm.



2. A right circular cone, 40 mm base diameter and 60 mm long axis is resting on Hp on one point of base circle such that it's axis makes 45^0 inclination with Hp and 40^0 inclination with Vp. Draw it's projections.
3. A regular pentagon of 30 mm sides is resting on HP on one of it's sides with it's surface 45^0 inclined to HP. Draw it's projections when the side in HP makes 30^0 angle with VP.