Roll No.:.....

National Institute of Technology, Delhi

Name of the Examination: B. Tech.

End-Semester Examination (Autumn, 2019)

Branch	**: CSE-Ist year**	**Semester**	**: 1st**
Title of the Course	**: Engineering Visualization**	**Course Code**	**: MEB 100**

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

Note : Use of pen for drawing sketches is forbidden. Pen can be used for writing procedures / mathematical calculations or notes, if required. Procedures need not be described unless specifically asked.

Section A

Q.1 Write short note on followings. (10 marks)

a) Diagonal scale (2)

b) Parabola and Hyperbola conic sections (2)

c) First angle projection methods and graphical symbol (2)

d) Difference between frustum and truncated solids (2)

e) Section plane (2)

Section B

Attempt any Four.

Q.2 A line PQ 100 mm long, is inclined at 30° to the H.P. and at 45° to the V.P. Its mid-point is in the V.P. and 20 mm above the H.P. Draw its projections, if its end P is in the third quadrant and Q in the first quadrant. (10)

Q.3 A square ABCO of 50 mm side has its corner A in the H.P., its diagonal AC inclined at 30° to the H.P. and the diagonal BO inclined at 45° to the V.P. and parallel to the H.P. Draw its projections. (10)

Q.4 A pentagonal pyramid, base 25 mm side and axis 50 mm long has one of its triangular faces in the V.P. and the edge of the base contained by that face makes an angle of 30° with the H.P. Draw its projections. (10)

Q.5 A cylindrical disc of thickness 10 mm and diameter 50 mm is resting on the ground. A frustum of pentagonal pyramid, having bottom of 20 mm sides, top face of 40 mm sides with 60 mm height is resting on the top surface of the disc so that axes of the both solids coincide. Take one of sides of the base of pentagon is perpendicular to V.P. Draw the projections of combined solid when the axis of combined solids is inclined to 30° with the H.P (i.e stage 1 &2). (10)

P.T.O

Q.6 A pentagonal pyramid has its base on the H.P. and the edge of the base nearer the V.P., parallel to it. A vertical section plane, inclined at 45° to the V.P., cuts the pyramid at a distance of 6 mm from the axis. Draw the top view, sectional front view and the auxiliary front view on an A.V.P. parallel to the section plane. Base of the pyramid 30 mm side; axis 50 mm long. (10)