Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(2009-2010 Batches)   (Sem.–1,2)

ENGINEERING DRAWING AND COMPUTER GRAPHICS

Subject Code : ME-102

Paper ID : [A0125]

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION - B & C. have FOUR questions each.**
3. **Attempt any FIVE questions from SECTION B & C carrying EIGHT marks each.**
4. **Select at least TWO questions from SECTION - B & C.**
5. **Assume missing data if any and clearly indicate it.**

SECTION-A

1. **Do as directed :**

   (a) "*In development of a cone and cylinder, the chord length between two successive points on the circumference is used for development, instead of the arc length*". Is it a correct approach? Comment.

   (b) Differentiate between right and oblique solid.

   Fill in the blanks :

   (c) If the top view of an object is 50 mm above line XY and its front view is 30 mm above XY the object is in the _____Quadrant.

   (d) A plane perpendicular to both the vertical and horizontal plane is called _____.

   (e) _____ is a regular polyhedron bounded by eight equal equilateral triangles.

   (f) An object is cut by a plane perpendicular to the VP and inclined to the HP the True shape will be seen in the _____ view.

   (g) Isometric length / true length = _____

   True / False

   (h) When a line is inclined to HP, the top view of the line is to be drawn first.

   (i) The auxiliary inclined plane (AIP) is inclined to HP and perpendicular to VP.

   (j) Intersection of two surfaces gives point or line.

SECTION-B

2   (a) Arrow heads drawn on a cutting plane line indicates _____ .   (2)

    (b) Show the following lines schematically and explain their significance :

        i) Dimension line

        ii) Hidden line   (3)

    (c) What do you understand by scaling in engineering drawing? Differentiate between reducing and enlarging scales.   (3)

3   A straight line PQ 60 mm long makes an angle of 40° to the HP and 20° to the VP. End P is 30 mm in front of VP and 40 mm above HP. Draw the projection of the line PQ.   (8)

4   Draw the projections of the hexagonal prism base 30 mm and axis 50 mm long when it is resting on the HP on a side of its base with the axis making an angle of 30° with the HP and plan of the axis making 45° with VP.   (8)

5   A pentagonal pyramid of base 35 mm and height 65 mm, rests with its base on HP such that one of its edges is perpendicular to VP. A section plane parallel to VP and perpendicular to HP cuts the prism 20 mm from the corner nearest to the observer. Draw the sectional front and top view.   (8)

SECTION-C

6   A sphere of 45 mm diameter is kept on the top face of the square prism of base 45 mm and height 20 mm. Draw the isometric projections of the combined solid.   (8)

7   What are the uses of freehand sketching in engineering field? Describe the steps to be followed in sketching a circle or an ellipse.   (8)

8   Draw the development of the cube of side 30 mm, when one of the edges of its base is parallel to the vertical plane.   (8)

9   A vertical cylinder of 50mm diameter and height 70mm, is standing on its base on HP, is completely penetrated by a horizontal cylinder of 35mm diameter and 70mm long such that their axis bisect each other at right angles and are parallel to VP. Draw the curves of interpenetration in front view.   (8)