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

Total No. of Questions : 09

B.Tech. (Sem.–1,2)
ENGINEERING DRAWING & COMPUTER GRAPHICS
Subject Code : ME-102 (2004–2010 Batch)
Paper ID : [A0125]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY.**
2. **Attempt any FIVE questions from SECTION - B & C.**
3. **Selecting at least TWO questions from SECTION - B & C each.**

SECTION-A (2 marks each)

l. (a) Differentiate between Ist angle and IIIrd angle of projections.

(b) What is a scale? Name its various types.

(c) What do you mean by Gothic lettering ? Write in single stroke Gothic lettering the word ‘‘ENGINEERING MATHEMATICS’’ free hand in 7 : 4 ratio.

(d) Draw long break line, cutting plane line and centre line.

(e) What is meant by orthographic projections?

(f) Draw free hand the isometric view of a circle when lying on HP.

(g) What are the apparent angles of inclination of a line? How these are different from true angles?

(h) Draw the frustom of a cone.

(i) What do you mean by Development of Surfaces? How it is helpful in manufacturing?

(j) Differentiate between a Prism and Pyramid.

SECTION-B **(8 marks each)**

2. A line AB 50 mm long is inclined to HP at 30° and to the VP at 45°. The point A is 20 mm above the HP and 35 mm in front of VP. Draw the projections of the line.

3. The distance between the two cities A and B is 250 kilometres. Its equivalent distance on the map measures only 5 cms. What is the RF? Draw a diagonal scale to show hundreds of kms, tens of kms and kilometres. Indicate a distance of 279 kilometres on the scale.

4. Draw the projections of a circular lamina of 50 mm dia whose centre is 30 mm from HP and 20 mm infront of VP. The circular lamina is inclined at an angle of 30° to HP and perpendicular to VP.

5. A pentagonal pyramid, side of base 25 mm and axis 50 mm long is resting on one of its slant face on horizontal plane with its axis parallel to VP. Draw its projections.

SECTION-C **(8 marks each)**

6. A hexagonal pyramid of 20 mm side and 50 mm height is resting on HP. Draw the isometric view of the pyramid.

7. A right cylinder of 30 mm dia and 35 mm height of axis is cut by a sectional plane inclined at 30° to HP and passes 20 mm from the base along the axis. Draw the development of the truncated cylinder.

8. A vertical cylinder of 500 mm dia standing on its base on HP is penetrated by a square prism of 25 mm base edges in such a way that their axes bisect each other at right angles., The side faces of the prism are equally inclined to HP. Draw the projections of the solids showing the curve of intersection.

9. Draw the elevation and top view in the directions 'E' and 'T' respectively.