Roll No. 2292300078

Total No. of Questions : 5]   [Total No. of Printed Pages : 4

EW-86-A

B.Tech. IInd Semester (CSE, IT. & Elect)

Examination, 2022

Engg. Graphics and CAD

Paper - BE - 205

Time : 3 Hours]   [Maximum Marks : 60

Note :- Attempt all the questions. All qustions carry equal marks. Construct neat & clean, well labelled diagrams.

1. (a) Draw a diagonal scale of R.F. 1 : 2.5, showing millimeters and centimeters and long enough to measures upto 25 centimeters.

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(b) Draw locus of a point on the periphery of a cricle which rolls on a curved path. Take diameter of rolling circle 50 mm and radius of directing circle i.e.., curved path, 75 mm

OR

(a) Construct an ellipse by Rectangle method. Take major axis 100 mm and minor axis 70 mm long. Draw Tangent and Normal.

(b) Construct a hyperbola when distance of the focus from the directrix is 50 mm & eccentricity is 3/2.

2. (a) Point A is 30 mm from H.P. and 40 mm from V.P. Draw its projections keeping it in all possible positions.

(b) The top view of a 75mm long line AB measures 65 mm while the length of its front view is 50mm. It's one end A is in the HP and 12 mm Infornt of VP.Determine the true length of line AB and its inclinations (θ and ϕ) with the two reference planes.

OR

(c) A $30^0 - 60^0$ set square of longest side 100 mm long is in V.P. and its surface inclined 45^0 to V.P. one end of longest side is 10 mm and other end is 35 mm above H.P. Draw its projections.

3. (a) A tetrahedron of 50 mm long edges is resting on one edge on H.P. while one triangular face containing this edge is vertical and 45^0 inclined to V.P. Draw its projections.

OR

(b) A cylinder of 50 mm base diameter & 60 mm long axis resting on its base on H.P. A section plane parallel to V.P. cut the cylinder at a distance 20 mm from the axis. Draw its sectional front and top view.

4. (a) A square prism of 40 mm edge of the base and 65 mm height stands on its base on the H.P. with vertical faces inclined at 45^0 with the V.P. a horizontal hole of 40 mm diameter is drilled centrally though the prism such that the hole passes through the opposite vertical edges of

the prism, draw the development of the surfaces of the prism.

OR

(b) A shpere of 40 mm diameter is resting centrally on the top of a square prims base 30 mm and axis 20 mm long. Draw the isometric view of the two solids.

5. (a) Define CAD ? Explain the role of computers in manufacturing.

(b) What are the various display devices that are used for displaying graphic information.

OR

(c) Explain the stages present in a conventional design process (any three) :-

(i) Problem identification

(ii) Problem definition

(iii) Geometric modelling

(iv) Prototype development

(v) Manufacturing process development

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