KUMARAGURU
college of technology
character is life

B.E. DEGREE EXAMINATIONS: APRIL / MAY 2023

(Regulation 2018)

Second Semester

ELECTRONICS AND COMMUNICATION ENGINEERING

U18MEI2201: Engineering Graphics

COURSE OUTCOMES

CO1: Construct various plane curves.

CO2: Construct projection of points and projection of lines.

CO3: Develop projection of surfaces and solids.

CO4: Solve problems in sections of solids and development of surfaces.

CO5: Apply free hand sketching and concepts of isometric in engineering practice.

CO6: Draw engineering drawing in AutoCAD with dimensions.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (5 x 20 = 100 Marks)

Q.No:1 is compulsory

1. Construct an ellipse when the distance between the focus and the directrix is 30 mm and the eccentricity is ¾. Also draw the tangent and normal at any point P on the curve.   CO1   [K_3]

2. a) A line AB is 75 mm long. A is 50 mm in front of VP and 15 mm above HP. B is 15 mm in front of VP and is above HP. Top view of AB is 50 mm long. Find the front view length and the true inclinations.   CO2   [K_3]

(OR)

    b) A regular pentagonal plate of 28 mm is placed with one side on HP such that the surface is inclined 45° to HP and perpendicular to VP. Draw its projections.   CO3   [K_3]

3. a) A hexagonal pyramid, side of base 25 mm and axis 50 mm long, rests with one of the edges of its base on HP and its axis is inclined at 30° to HP and parallel to VP. Draw its projections.   CO3   [K_4]

(OR)

b) Draw the projections of a cylinder, base 30 mm diameter and axis 40 mm long, resting with a point of its base circle on HP such that the axis is making an angle of 30° with HP and parallel to VP. CO3 [K₃]

4. a) A cone, base 50 mm diameter and axis 65 mm long, rests with its base on HP. It is cut by a section plane perpendicular to VP, inclined at 45° to HP and passing through a point on the axis 35 mm above the base. Draw the sectional top view and the true shape of section. CO4 [K₃]

(OR)

b) A pentagonal prism of side of base 25 mm and altitude 50 mm rests on its base on the HP such that an edge of the base is parallel to VP and nearer to the observer. It is cut by a plane inclined at 45° to HP, perpendicular to VP and passing through the center of the axis. (i) Draw the true shape of section. (ii) Draw the development of the complete surfaces of the truncated prism. CO4 [K₃]

5. a) A right hexagonal prism of side of base 24 mm and axis 56 mm long is lying on one of the corners of the base. Its axis is inclined at an angle of 30° to HP. Draw the isometric projection of the solid. CO5 [K₃]

(OR)

b) Sketch the front, top and left side views of the object shown in below figure. The dimensioning is also to be marked by freehand. CO5 [K₃]

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