

2023
B.E. (Civil), First Semester
ESC-X04: Engineering Graphics

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

1. (a) Where, in drawing, locus line is being used? 2*5=10
- (b) What do you understand by normal, compressed and extended lettering?
- (c) What is the importance of development of surfaces?
- (d) Show by traces the following plane: Plane inclined to both VP and HP.
- (e) Name few practical applications of intersection of surfaces.

Section A

2. (a) What are the different options available under 'Chamfer' and 'Trim' command? 3
- (b) Discuss the utility of following AutoCAD commands: Extend, Spline. 2
- (c) A line CD, 90 mm long, measures 71 mm in FV and 63 mm in TV. Draw the projections of the line if point C is 30 mm above HP and 15 mm in front of VP. Also determine the true inclinations of the line. 5
3. A regular hexagonal lamina of side 30mm rests on H.P. on one of its sides such that the surface of the lamina is perpendicular to VP and inclined to H.P. at an angle of 45°. Draw its projections in first quadrant. 10
4. Draw the projections of a pentagonal prism, base 25 mm side and axis 50 mm long, resting on one of its longer edge on H.P. with axis inclined at 40° to V.P. 10

Section B

5. A cone of base diameter 40 mm and height 65 mm is resting on its base on HP. It is cut by a section plane inclined at 30° to H.P. and passes through midpoint of the axis. Develop the lateral surface of the truncated cone. 10
6. A right circular cylinder of $\phi 40$ mm and 50 mm long rests centrally on the top of a cube of side 40mm. Draw the isometric projection of the solids. 10
7. What are the uses of auxiliary planes? Discuss the procedure to draw the projections of a line using auxiliary plane method, which is inclined to both the reference planes and is in first quadrant. Assume suitable value of true length of line. 10

x-x-x