Exam.Code:0905
Sub. Code: 33245

2076
B.E., First Semester
ESC-X04: Engineering Graphics
(Common with EEE, CIVIL, ECE)

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 Unit. Assume any missing data. All dimensions are in mm, if not mentioned otherwise. All software related questions must be answered with respect to AutoCAD software.*

x-x-x

1. Answer the following:-
   a) What are different ways to draw a line in AutoCAD?
   b) What is principle to determine true length of a line in Trapezoid Method?
   c) What are differences between Plane and Lamina?
   d) What is True section and Apparent section?
   e) What are differences between Isometric Projection & Orthographic Projection?

(5x2)

UNIT - I

2. a) Discuss the use of following commands in 2D construction:
   (i) Array
   (ii) Trim
   (iii) Extend
   (iv) Break
   (v) OSNAP

   b) A regular hexagonal lamina ABCDEF of 20 mm side, rests on HP on one of its sides say BC such that it is perpendicular to the HP and inclined to VP at 30°. Draw its projections and locate its traces too. (2x5)

3. A line AB has its end A 15 mm above the HP and 20 mm infront of the VP. End B is 50 mm infront of the VP. The vertical trace is 7 mm above the HP. Draw the projections of the line if the distance between end projectors is 45 mm and find its true length, true angles and horizontal trace. (10)

P.T.O.

4. A right regular pentagonal pyramid, edge of base 30 mm and height 50 mm rests on one of its base corners on HP and the base is inclined at 25° to the HP. The side opposite to the corner is inclined at 30° to the VP. Draw its projections. (10)

UNIT - II

5. A right regular hexagonal prism, side of base 20 mm and height 45 mm rests on a corner of its base on the HP with the longer edge passing through this corner making an angle of 30° to the HP. A section plane parallel to the HP cuts the axis at a distance of 15 mm from top base. Draw its sectional top view and front view. (10)

6. A square pyramid, edge of base 30 mm and height 50 mm, rests on its base in HP with one of its base edges is parallel to VP. A section plane perpendicular to the VP and inclined to the HP at 30° cuts the pyramid bisecting its axis. Draw its front view, sectional top view and develop the lateral surface of truncated pyramid. (10)

7. Draw isometric drawing of a funnel consisting of a cylinder and a frustum of a cone. The diameter of the cylinder is 30 mm and top diameter of the frustum is 50 mm. The height of frustum of a cone and cylinder are both equal to 40 mm. (10)

x-x-x