Exam.Code:0905
Sub. Code: 6196

2123

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. I which is compulsory and selecting two questions from each Section.*

x-x-x

1. (a) Enlist the differences between 1st angle and 3rd angle projection system.
   (b) What do you understand by polar coordinates?
   (c) What is the difference between apparent section and true section?
   (d) Show by traces the following planes: Auxiliary Inclined Plane and Auxiliary Vertical Plane.
   (e) State the principle of development of surfaces. Name few practical applications of development.

(5x2)

Section A

2. (a) What is the importance of dimensioning? Explain with the help of a simple sketch aligned and unidirectional system of dimensioning. 4
   (b) A straight line AB, 60 mm long, makes an angle of 25° with H.P. and 55° to V.P. End A is in V.P. and 20 mm above H.P. Draw the projections of the line and locate its traces also. 6

3. A hexagonal lamina of side 30 mm is resting on a corner in H.P., with its surface making an angle of 30° with H.P. The top view of the diagonal passing through that corner is inclined at an angle of 60° to V.P. Draw the projections of the lamina. 10

4. A hexagonal prism of base side 30 mm, axis 60 mm long is resting on H.P. on one of its base corners with axis inclined at 40° to H.P. and parallel to V.P. Draw its projections. 10

Section B

5. A square pyramid, base edge 25 mm and height 50 mm rests on its base on H.P. in such a way that one of its base edges makes an angle of 30° with V.P. A section plane parallel to H.P. cuts the pyramid at a distance 20 mm from the base along the axis. Draw its front view and sectional top view. 10

6. A right circular cylinder of ϕ 30 mm base and height 40 mm is cut by a section plane inclined at 30° to H.P. and passes 20 mm from base along the axis. Draw the development of the truncated cylinder. 10

7. A right circular cone of ϕ 30 mm base and height 30 mm rests centrally on the top of a pentagon prism of 40 mm side and height 40 mm. Draw the isometric projection of the solids. 10

x-x-x