

[6401]-2406

F.E.

**ESC-103-MEC : ENGINEERING GRAPHICS
(2024 Pattern) (Semester - I/II)**

Time : 3 Hours]

[Max. Marks : 70]

Instructions to the candidates:

- 1) Attempt Q.2 or Q.3, Q.4 or Q.5, Q.6 or Q.7, Q.8 or Q.9 or Q.10.
- 2) Figures to the right indicate full marks.
- 3) State clearly the assumptions made, if any.
- 4) Use of non-programmable calculator is allowed.
- 5) Assume suitable data, if necessary.

Q1) The end point P of line PQ is 25 mm above HP while its point Q is 15 mm in front of VP. Its plan and elevation makes 40° and 35° with XY respectively. Draw the projection, if the projector distance between the end points is 60 mm. Find inclination made by the line with HP and VP. [12]

OR

Q2) A line AB 70 mm long is inclined at an angle 30° to HP. Its end point A is 10 mm above HP and 15 mm in front of VP. Elevation length of the line is 45 mm. Draw the projections of line. [12]

Q3) An equilateral triangle of 60 mm side is resting on HP on one of its side. Then its surface is inclined with HP at an angle of 40° . Draw the projections of plane, if the resting side is inclined to VP at an angle of 30° . [12]

OR

Q4) A pentagonal plane of side 40 mm is resting on HP on its corner and the edge opposite to the corner makes an angle of 25° with VP. Surface of the plane, is inclined at 40° to HP. Draw the projections of the plane. [12]

P.T.O.

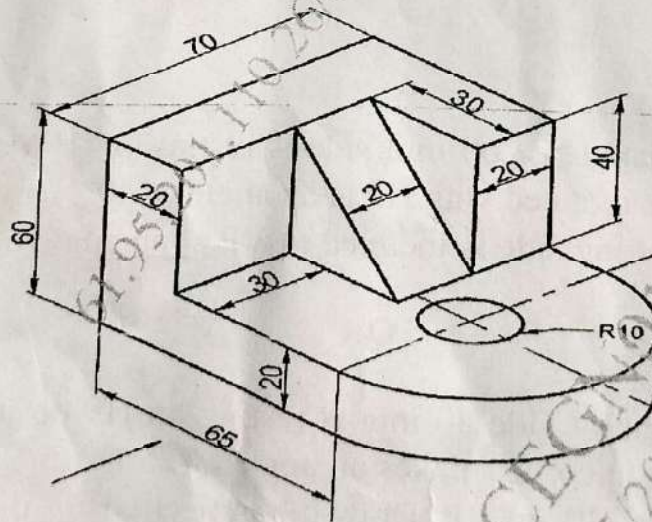
- Q5) a) Draw the ellipse by focus directrix method if the distance from focus to directrix is 60 mm and the eccentricity ratio is $\frac{2}{3}$. [7]
- b) Draw the development of lateral surfaces of pentagonal prism of base side 30 mm and axis height 80 mm. [7]

OR

- Q6) a) Draw the involute of circle of diameter 50mm. [7]
- b) Draw the development of lateral surface of cone of base diameter 50 mm and axis height 70 mm. [7]

Q7) Fig. shows a pictorial view of an object. Using first angle method of projection draw: [16]

- a) Front View [5]
- b) Top View [5]
- c) Right Hand Side View [5]
- d) Give Dimensions [1]

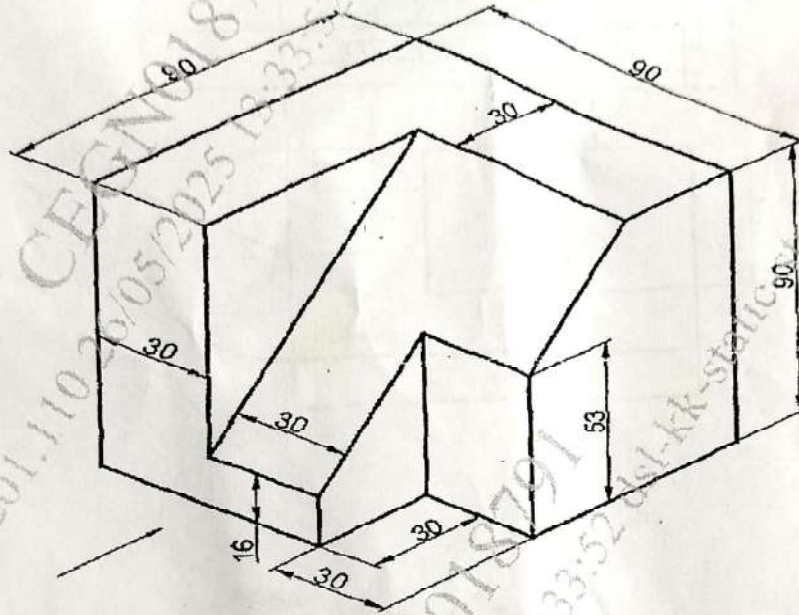


OR

Q8) Fig. shows a pictorial view of an object. Using first angle method of projection draw:

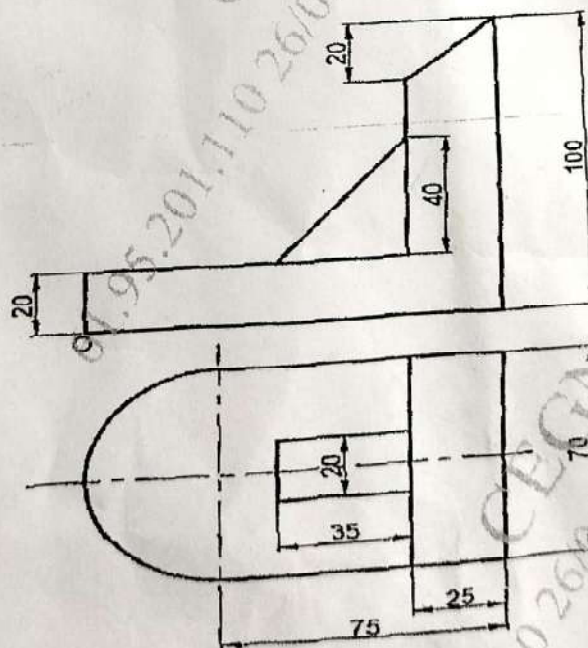
- Front View
- Top View
- Right Hand Side View
- Give Dimensions

[16]
[5]
[5]
[5]
[1]



Q9) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view.

[16]



OR

Q10) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view. [16]

