

Total No. of Questions : 10]

SEAT No. :

PE12177

[Total No. of Pages : 7

[6581]-2408

F.E.

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

Time : 3 Hours]

[Max. Marks : 60

Instructions to the candidates:

- 1) Attempt Q1 or Q2, Q3 or Q4, Q5 or Q6, Q7 or Q8, Q9 or Q10.
- 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)** A point of line AB is in HP and 20mm in front of VP its front view and top view makes an angle of  $40^\circ$  and  $45^\circ$  with the HP and VP respectively. The projector distance end points of line is 50mm. Draw the projection of line find its true length and True inclinations. [10]

OR

**Q2)** The point A of 80mm long line AB is 15mm above HP, while its other end B is 60mm above HP and 20mm in front of VP. Draw the projection of line AB, if its FV measures 65mm. Find inclinations made by line with the HP and VP. [10]

**Q3)** A hexagonal plane of 30mm side has one of its sides on the H.P. and inclined at  $45^\circ$  to the V.P. The surface of the plane is inclined at  $45^\circ$  to H.P. Draw its projections. [10]

OR

**Q4)** A rectangular plane ABCD with side AB 30mm and BC 50mm is resting on the H.P. on its smaller side AB. Draw the projections of the plane when its surface makes an angle of  $45^\circ$  with the H.P. and the side AB which is on the H.P. is inclined at  $45^\circ$  to the V.P. Draw the projections of the plane. [10]

- Q5) a)** Draw an ellipse by rectangle method if the major axis and minor axis are 100mm and 80mm respectively. [6]
- b)** Draw the development of the lateral surface of the square pyramid of base side 30mm and axis height 60mm, when one side of the base is at  $45^\circ$  to V.P. [6]

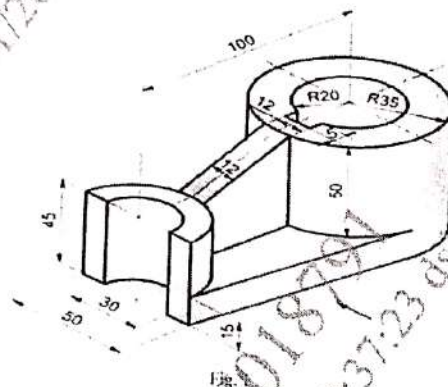
OR

P.T.O.

- Q6) a) Draw a hyperbola by directrix focus method if focus is 60mm from directrix and eccentricity is  $\frac{3}{2}$ . [6]  
 b) Draw the development of the lateral surface of a Pentagonal prism of base side 30mm and axis height 70mm. [6]

Q7) Fig. 1 shows pictorial view of an object. Using first angle method of projections draw :

- a) Sectional Front View [14]  
 b) Top View [5]  
 c) Left Hand Side View [4]  
 d) Give Dimensions [4]  
 [1]



OR

Q8) Fig. 2 shows pictorial view of an object. Using first angle method of projections draw :

- a) Front View [14]  
 b) Top View [5]  
 c) Left Hand Side View [4]  
 d) Give Dimensions [4]  
 [1]

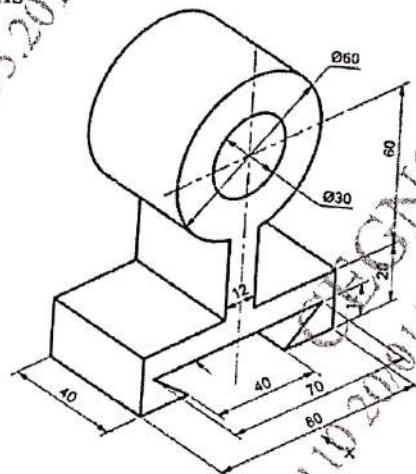
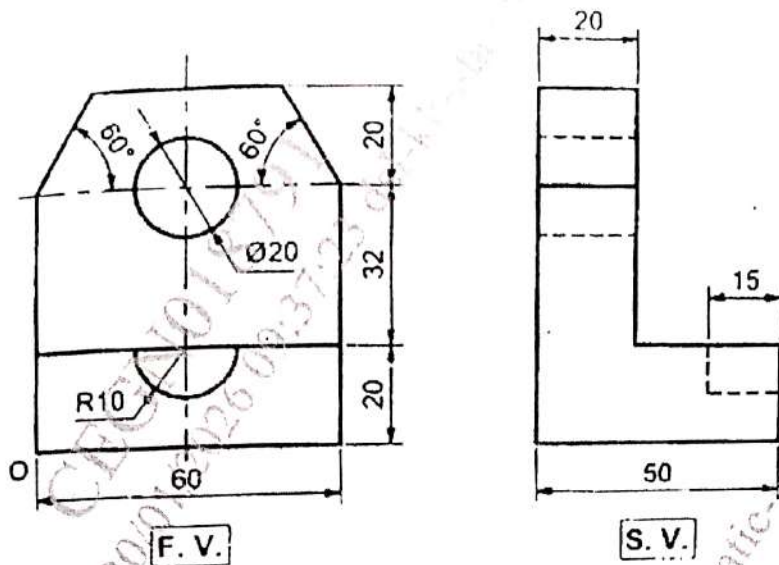


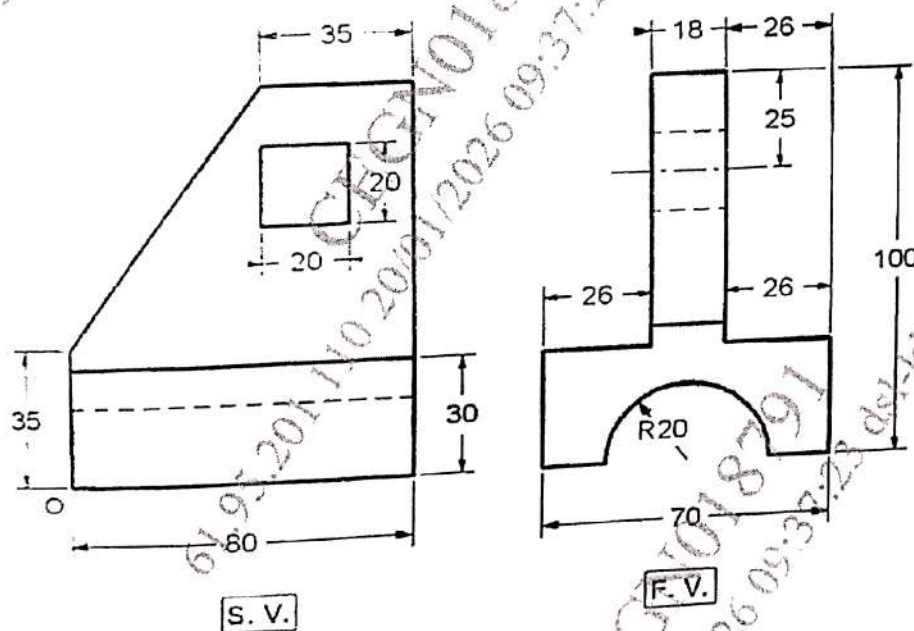
Fig. 2

Q9) Figure show orthographic views of an object by first angle method of projection.  
Draw its isometric view. [14]



OR

Q10) Figure show orthographic views of an object by first angle method of projection.  
Draw its isometric view. [14]



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