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-programmble 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 40º and 45º 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 ling 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 45º to the V.P. The surface of the plane is inclined at 45º 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 45º with the H.P. and the side AB which is on the H.P. is inclined at 45º 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 45º to V.P. **[6]**

OR

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Q6) a) Draw a hyperbola by directrix focus method if focus is 60mm from directrix and eccentricity is 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 : **[14]**

a) Sectional Front View **[5]**

b) Top View **[4]**

c) Left Hand Side View **[4]**

d) Give Dimensions **[1]**

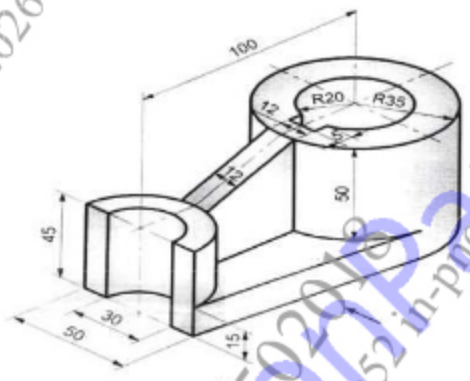


Fig. 1

OR

Q8) Fig. 2 shows pictorial view of an object. Using first angle method of projections draw : **[14]**

a) Front View **[5]**

b) Top View **[4]**

c) Left Hand Side View **[4]**

d) Give Dimensions **[1]**

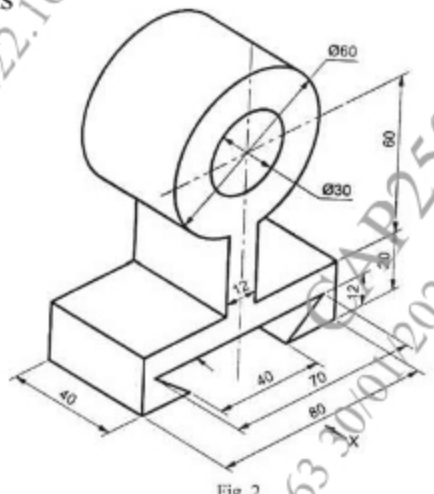
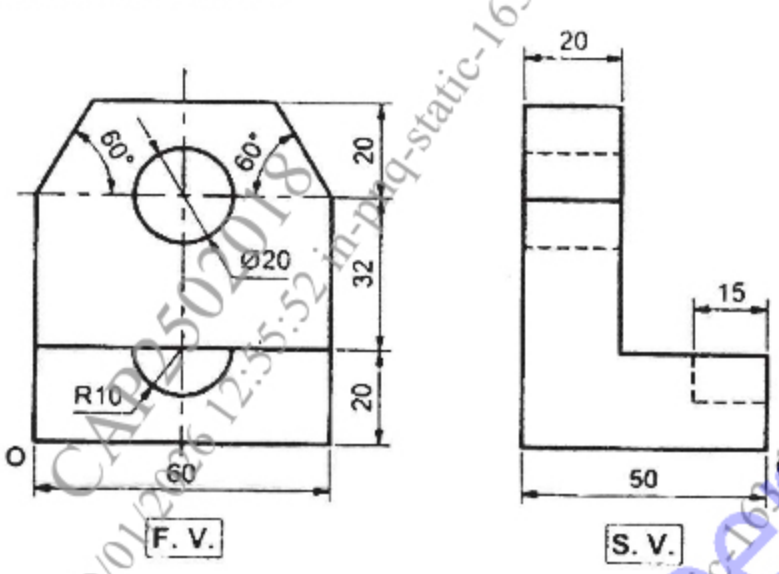


Fig. 2

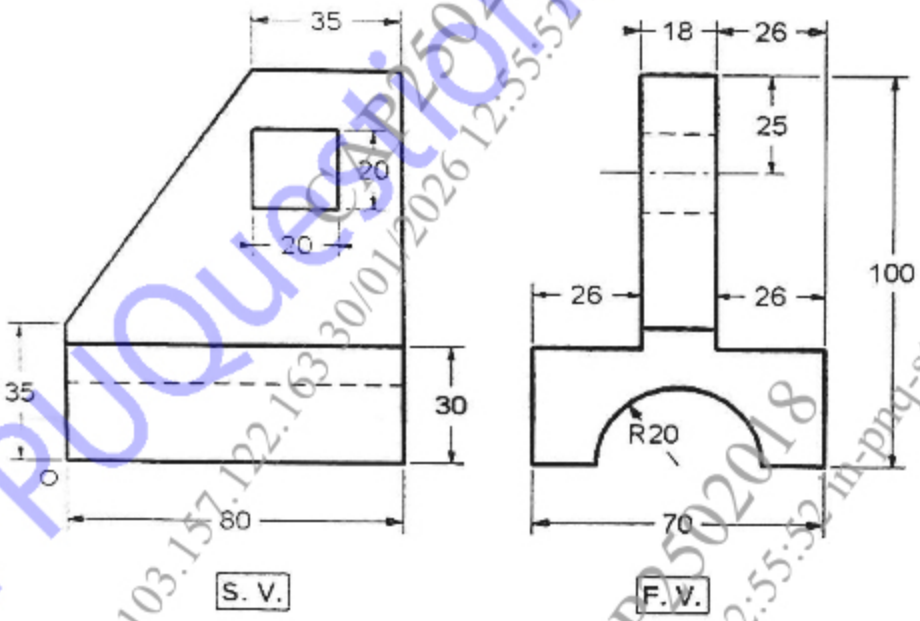
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Q9) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view. **[14]**



OR

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



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(2024 Pattern) (Credit System) (Semester - I/II)

Time : 3 Hours] *[Max. Marks : 70*

Instructions to the candidates:

1) ***Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8, 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 line AB which is 120 mm long makes 35º angle with HP. Its end A is 25 mm above HP and 15 mm infront of VP. Draw the projections of line if its elevation makes 40º angle with XY. **[12]**

OR

Q2) The end Q of line PQ is 25 mm above HP and end P is 30 mm infront of VP. The distance between end projectors of line is 70 mm. Draw the projections of the line if the elevation and plan of the line make 40º and 50º with XY line respectively. **[12]**

Q3) A Hexagonal plate base side 50 mm is resting in HP on one of its corner with its side parallel to VP. Its surface is inclined to HP so that the corner opposite to the resting corner is 51 mm above HP. Draw the projections, if its top view line passing through resting corner and its opposite corner is inclined to VP at an angle of 35º. **[12]**

OR

Q4) Draw the projections of a regular hexagon of 35 mm sides, having one of its sides in the HP and inclined at 60 degree to the VP and its surface making an angle of 40 degree with the HP. **[12]**

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Q5) a) Construct an ellipse by directrix and focus method if distance of focus from the directrix is 60 mm. Take eccentricity e=1/2. **[7]**

b) Draw the development of the lateral surface of a pentagonal pyramid having base edge 45 mm and axis height 90 mm resting on HP in such a way that one of its base edges is parallel to VP. **[7]**

OR

Q6) a) Construct and name the curve having eccentricity e 4/2 and distance of the focus from the directrix is 60 mm. **[7]**

b) Draw the development of lateral surfaces of a cone having base diameter 50 mm and axis height 100 mm resting on HP on its base. **[7]**

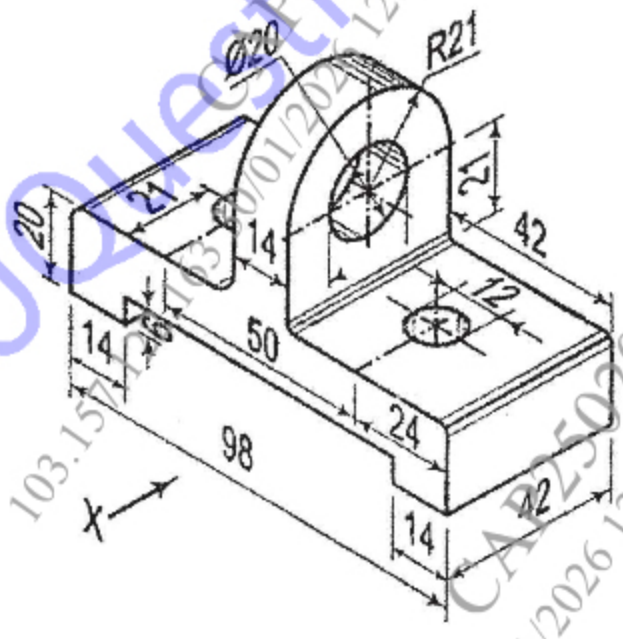
Q7) Fig. shows pictorial view of an object. Using first angle method of projection draw: **[16]**

a) Front View of object **[6]**

b) Top View **[4]**

c) Right Hand Side View **[5]**

d) Give Dimensions **[1]**



OR

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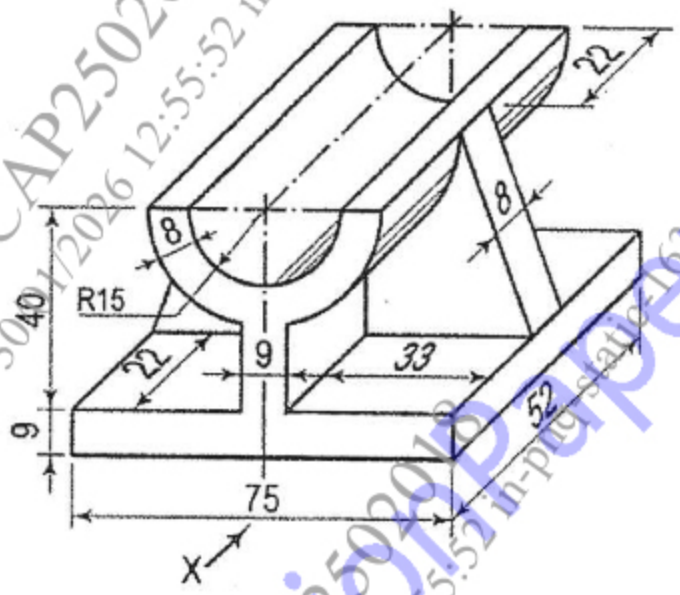
Q8) Fig. shows pictorial view of an object. Using first angle method of projection draw: **[16]**

a) Sectional Front View along symmetry of object **[6]**

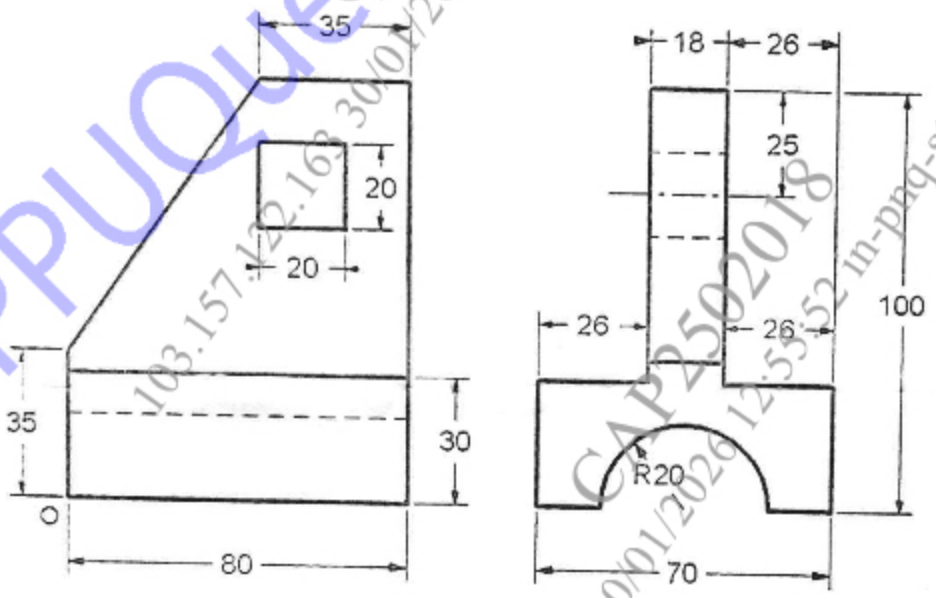
b) Top View **[4]**

c) Right Hand Side View **[5]**

d) Give Dimensions **[1]**



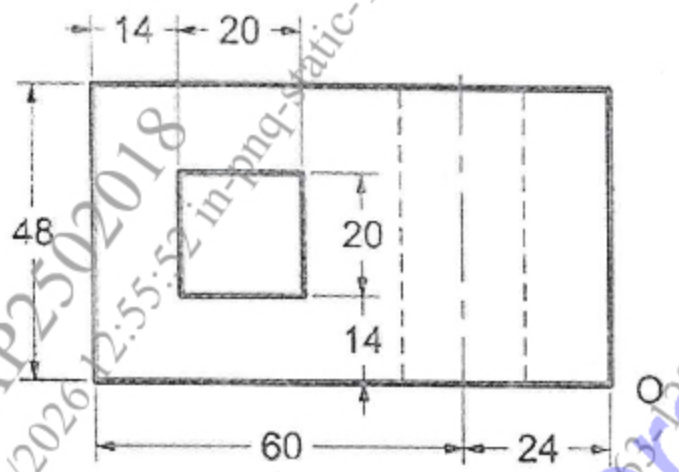
Q9) Figure show orthographic views of an object by first angle method of projection. Draw its isometric view. **[16]**

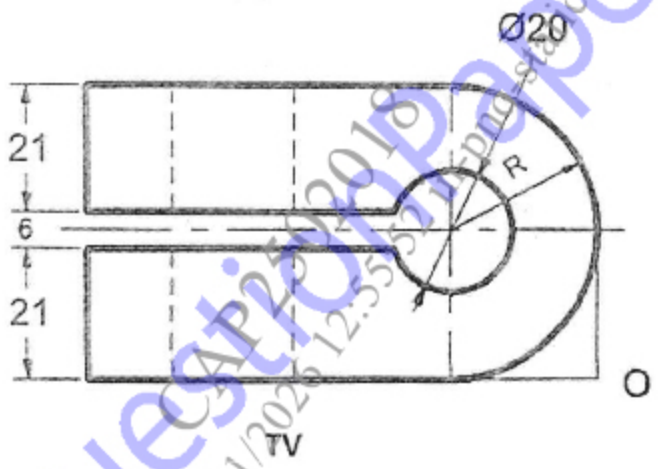


OR

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





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