

Total No. of Questions—8]

[Total No. of Printed Pages—4

Seat No.	
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[5056]-17

F.E. EXAMINATION, 2016
ENGINEERING GRAPHICS—I
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Use only half imperial size drawing sheet as answer book.
(ii) Retain all construction lines.
(iii) Assume suitable data if necessary.

1. A point P of line PQ is 25 mm above H.P. and point Q is 20 mm in front of V.P. The plan and elevation makes 36^0 and 40^0 with XY respectively. Draw the projections if the projector distance between the end points is 60 mm. Also locate the traces and find the true length. [12]

Or

2. An equilateral triangular plate ABC is resting in V.P. on side AB, 60 mm. Then its surface is inclined to V.P. at 40^0 . Draw the projections if points B and C are 10 mm and 60 mm above H.P. respectively. Find inclination made by the plate with H.P. [12]

3. A cylinder of base diameter 60 mm and axis height 80 mm is resting on H.P. on one of the base circumferential point. Draw the projections if its axis is inclined at an angle of 35^0 and 45^0 with V.P. and H.P. respectively. [13]

P.T.O.

$$Or$$

4. (a) Draw a helix of one revolution to a cylinder of base diameter 60 mm and axis height 120 mm. [7]
(b) Draw the development of lateral surface of triangular prism of base side 40 mm and axis height 60 mm. [6]
5. Figure 1 shows a pictorial view of an object. By using first angle method of projections, draw :
 - (i) Front view [4]
 - (ii) Sect. Left hand side view along sectional plane B-B [4]
 - (iii) Top view [4]
 - (iv) Dimensions. [1]

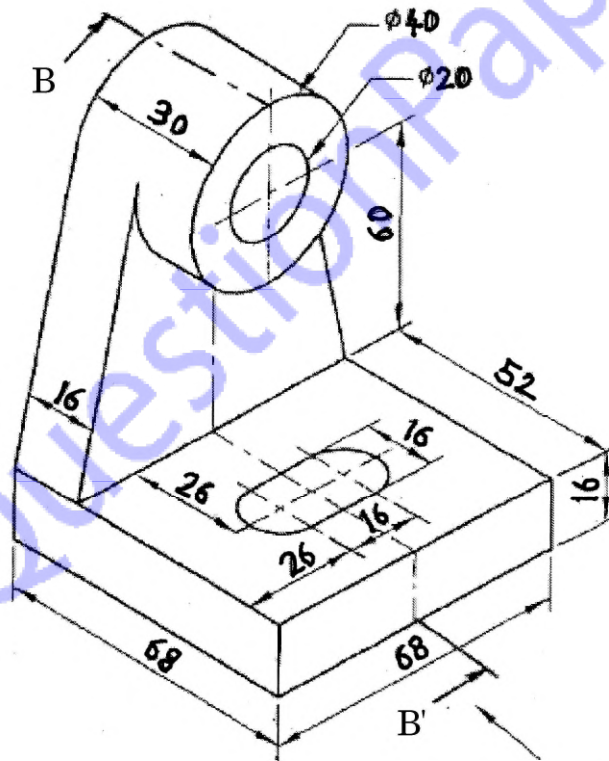
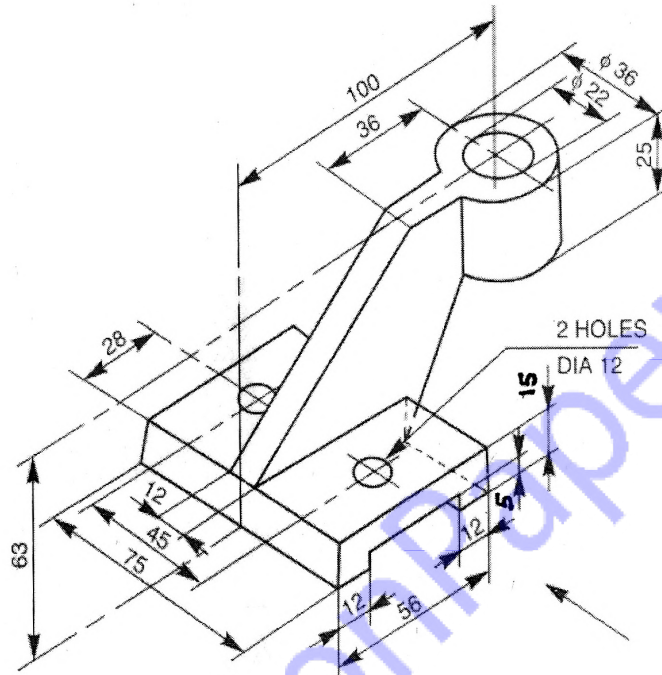


Fig.1

$$Or$$

- 6.** Figure 2 shows a pictorial view of an object. By using first angle method of projections, draw :
- (i) Sectional front view, along line of symmetry [4]
 - (ii) Left hand side view [4]
 - (iii) Top view [4]
 - (iv) Dimensions. [1]

**Fig. 2**

7. Figure 3 shows front view and end view of a bracket. Draw isometric view and show overall dimensions. [12]

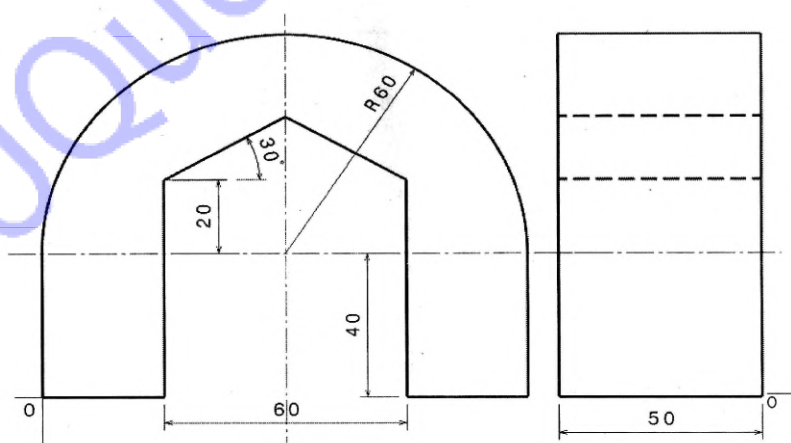


Fig. 3

Or

8. Figure 4 shows front view and top view of an object. Draw isometric view and show overall dimensions. [12]

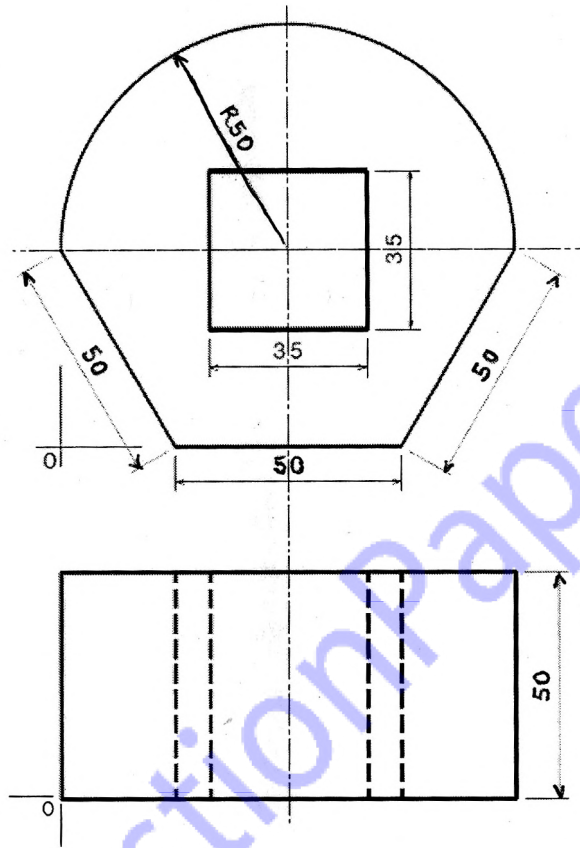


Fig. 4

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Seat No.	
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[5151]-103

F.E. EXAMINATION, 2017
ENGINEERING GRAPHICS—I
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Use only half imperial size drawing sheet as answer-book.
(ii) Retain all construction lines.
(iii) Assume suitable data, if necessary.

1. A line PQ 90 mm long, is inclined to H.P and V.P. at 34° and 30° respectively. Draw the projections if point P is 25 mm above H.P. and point Q is 20 mm in front of V.P. Also locate the traces. [12]

Or

2. A circular plate of diameter 60 mm is resting on H.P. It is then inclined to H.P. so that the point opposite to resting points is 40 mm above H.P. Draw the projections if the plan of diameter line passing through resting point makes 35° with XY. Find inclinations made by the plate with reference planes. [12]
3. A cone of base diameter 60 mm and axis height 80 mm is resting on H.P. on its base circumferential point. Draw the projections if its axis is inclined at an angle of 35° and 30° with V.P. and H.P. respectively, with apex nearer to observer. [13]

P.T.O.

Or

4. (a) Draw a helix of one revolution to a cylinder of base diameter 60 mm and axis height 120 mm. [7]
- (b) Draw the development of lateral surface of pentagonal prism of base side 30 mm and axis height 60 mm. [6]
5. Figure 1 shows a pictorial view of an object. By using first angle method of projections, draw :
- (i) Front view [4]
- (ii) Sec. right hand side view along the line of symmetry [4]
- (iii) Top view [4]
- (iv) Dimensions. [1]

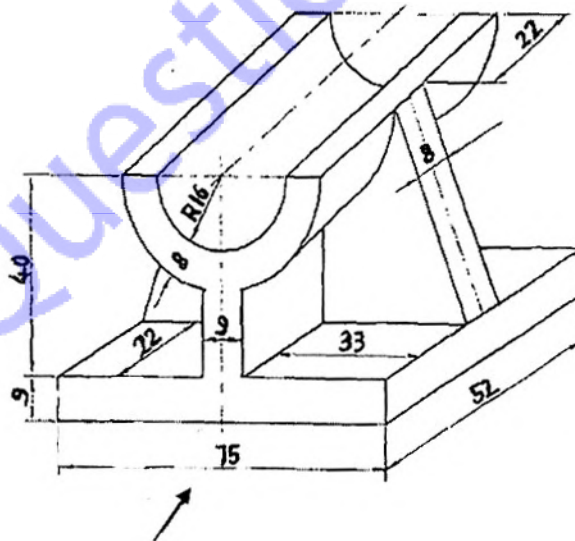


Figure 1

Or

6. Figure 2 shows a pictorial view of an object. By using first angle method of projections, draw :

- (i) Sectional front view, along sectional plane [4]
- (ii) Left hand side view [4]
- (iii) Top view [4]
- (iv) Dimensions. [1]

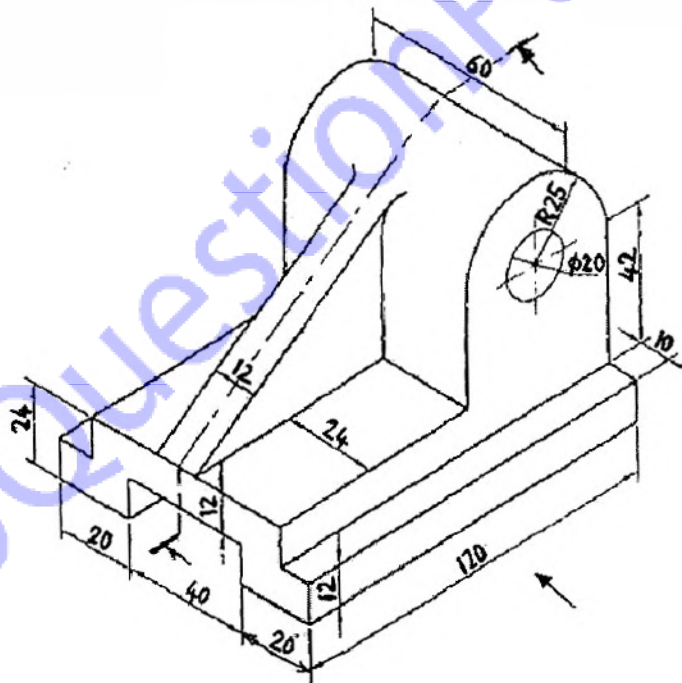


Figure 2

7. Figure 3 shows front view and end view of a bracket. Draw isometric view and show overall dimensions. [12]

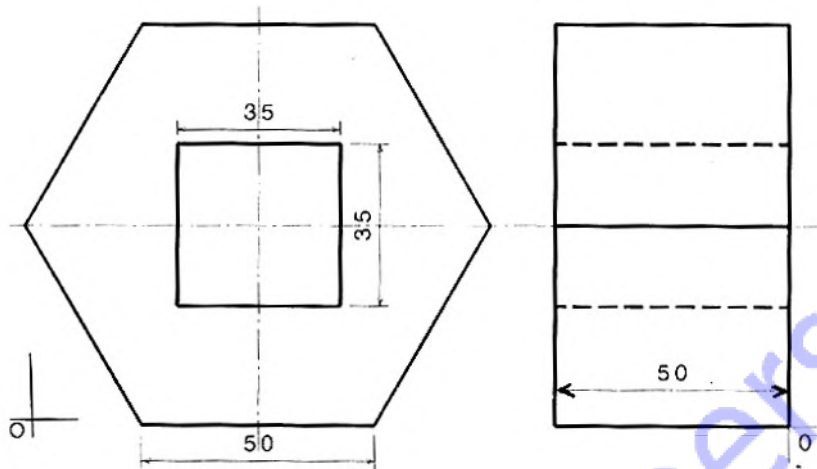


Figure 3

Or

8. Figure 4 shows front view and end view of an object. Draw isometric view and show overall dimensions. [12]

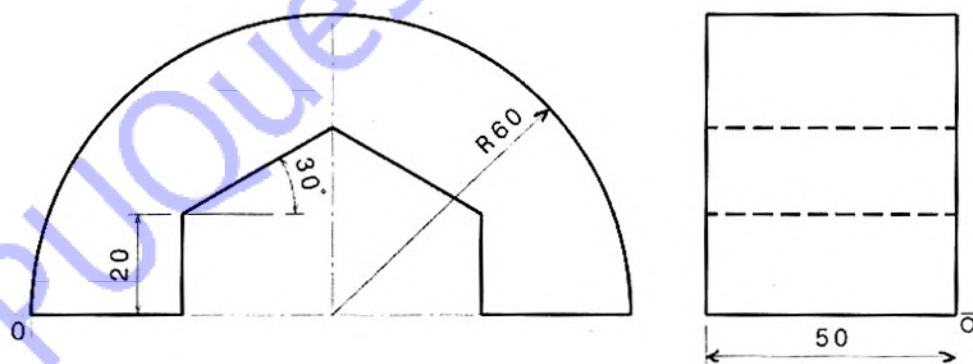


Figure 4

Total No. of Questions : 8]

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P4423

[Total No. of Pages : 3

[5251]-1007

F.E. (Engineering) (II Semester)

ENGINEERING GRAPHICS - I

(2015 Pattern)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates :

- 1) Retain all construction lines.
- 2) Figure to the right indicates full marks.
- 3) Assume suitable data wherever necessary.
- 4) Use of electronic pocket calculator is allowed (non-programmable).

Q1) The point A of line AB is in H.P and 15 mm in front of V.P. Its front view and top view makes 51° and 48° with H.P. and V.P. respectively. Draw the projections of line AB if projector distance between end points of the line is 41 mm. Find its true length, true inclinations and locate its traces. [12]

OR

Q2) A hexagonal plate of 35 mm side is resting on one of its corner on the H.P. Draw projections of the plate when the plate surface makes an angle of 35° to H.P. and the diagonal passing through resting corner makes 22° inclination to V.P. [12]

Q3) A hexagonal prism of base 35 mm and height 85 mm is resting on one of its base corners. The vertical edge passing through the resting corner makes 45° inclination to H.P. Draw projections of the prism when the axis makes 22° inclination to V.P. [13]

OR

- Q4)** a) Draw a Parabola of 100 mm height and 150 mm base. [7]
- b) Draw the development of lateral surface of pentagonal prism of base side 30 mm and axis height 70 mm. [6]

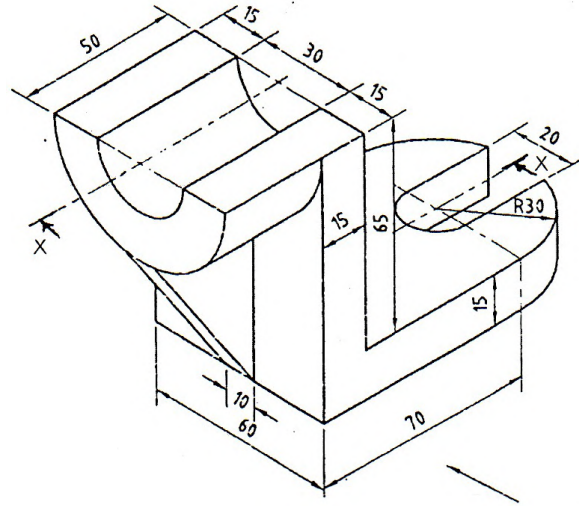
P.T.O.

Q5) For the pictorial view shown in the Figure draw,

[13]

- Sectional front view along the section XX
- Top view
- Left hand side view

Place all necessary dimensions. Use first angle method of projections.



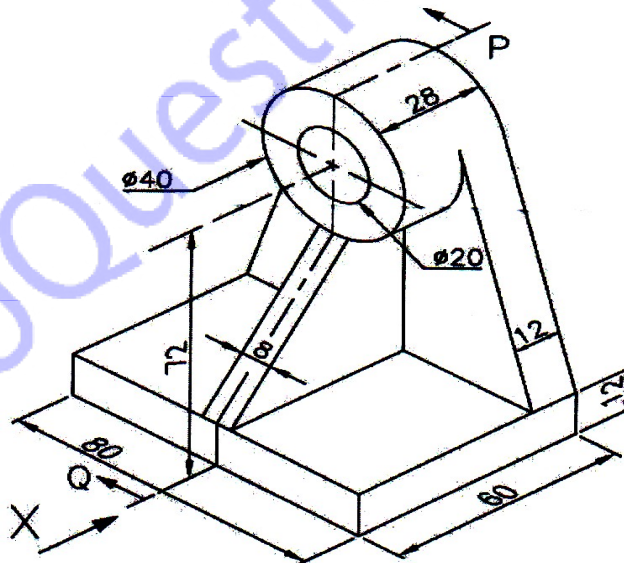
OR

Q6) For the pictorial view shown in the Figure draw,

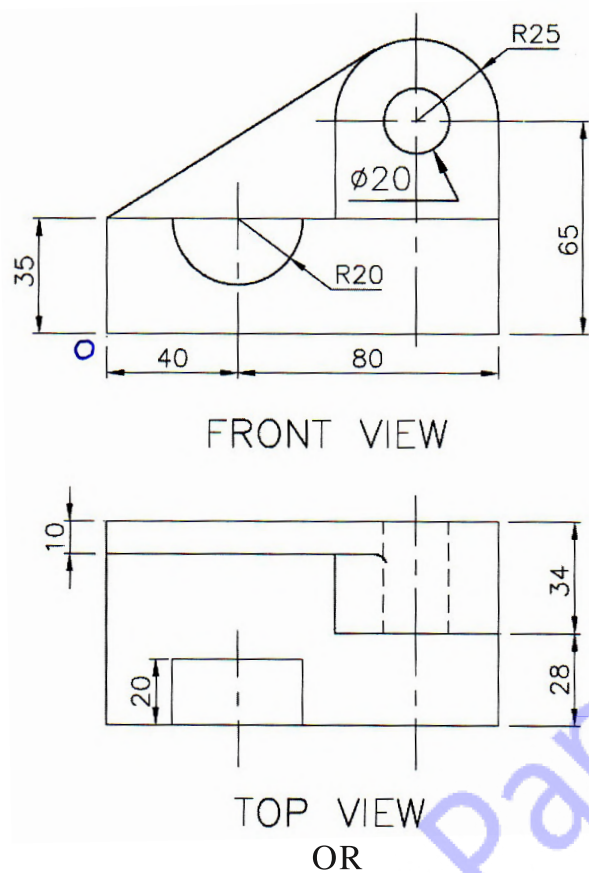
[13]

- Front view in the direction X
- Top view
- Sectional Right hand side view along PQ

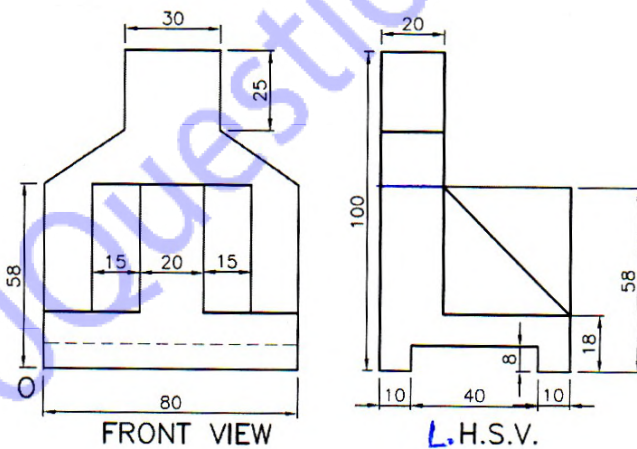
Place all necessary dimensions. Use first angle method of projections.



- Q7)** Figure shows front view and top view of an object. Draw Isometric view and show overall dimensions. [12]



- Q8)** Figure shows front view and right hand side view of an object. Draw Isometric view and show overall dimensions. [12]



Total No. of Questions :8]

SEAT No. :

P4023

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[5351] - 103

F.E. Engineering

ENGINEERING GRAPHICS - I

(2015 Pattern) (Semester - I)

Time : 2 Hours]

[Max. Marks :50

Instructions to the candidates:

- 1) *Retain all construction lines.*
- 2) *Figure to the right indicates full marks.*
- 3) *Assume suitable data wherever necessary.*
- 4) *Use of electronic pocket calculator is allowed (non-programmable).*

Q1) A line AB resting in the first quadrant has its end A is 30 mm from the H.P. and in the V.P. End B is at 30 mm in-front of V.P. Draw projections of the line if, its elevation makes 39° inclination to H.P. plan makes 30° inclination to V.P. Draw its projections and locate the traces. **[12]**

OR

Q2) A hexagonal plate ABCDEF of 35 mm size is resting on its corner F on the H.P. Draw projections of the plate when the plate surface makes an angle of 35° to H.P. and plan of the FC makes 40° inclination to V.P. **[12]**

Q3) A hexagonal pyramid of base 35 mm and height 85 mm is resting on one of its base corners. The slant edge passing through resting corner makes 35° inclination to H.P. Draw projections of the pyramid when the plan of axis makes 40° inclination to V.P. **[13]**

OR

Q4) a) Draw a conic section when eccentricity ratio is one. The distance between fixed line and focus is 50 mm; Name the curve and give all necessary dimensions. **[7]**

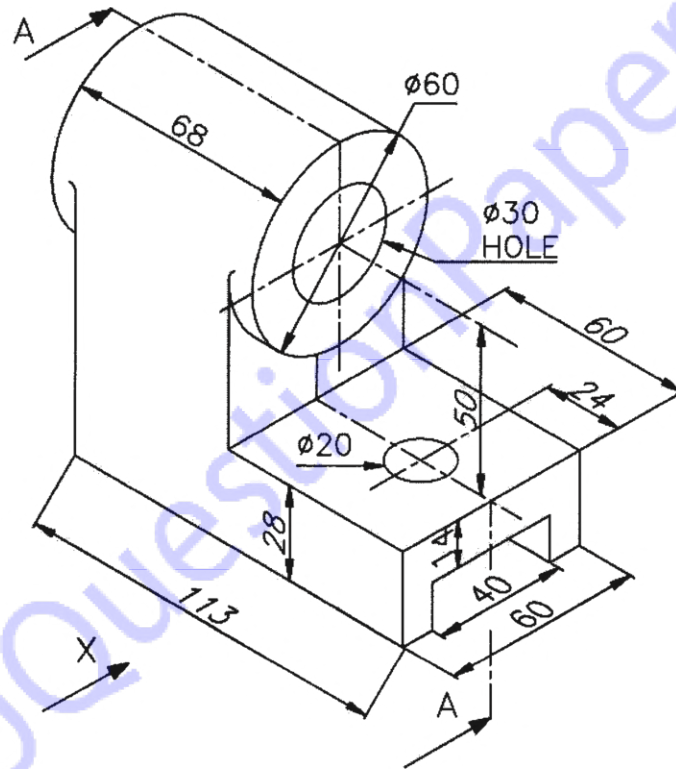
P.T.O.

- b) Draw the development of lateral surface of hexagonal prism of base side 25 mm and axis height 65 mm. [6]

Q5) For the pictorial view shown in the Figure draw, [13]

- Sectional Front view in the direction X (along section AA)
- Top view
- Right hand side view

Place all necessary dimensions. Use first angle method of projections.

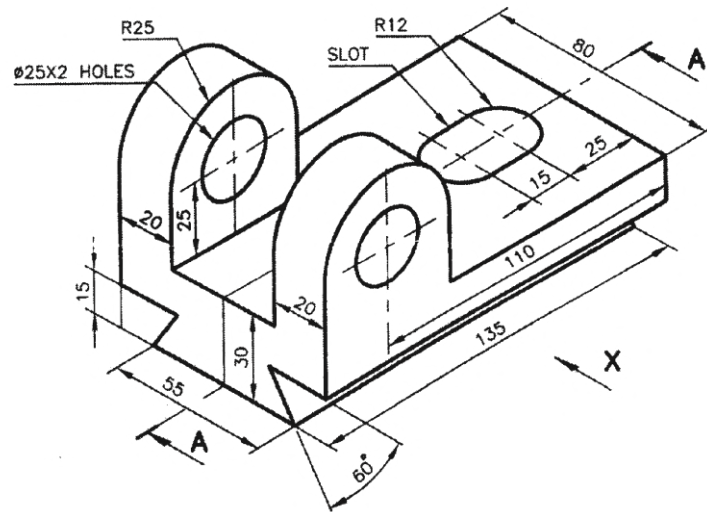


OR

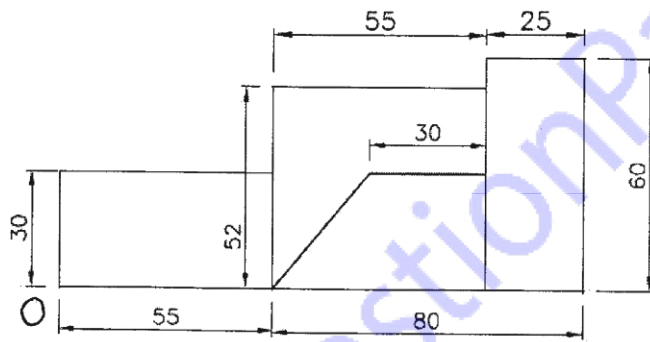
Q6) For the pictorial view shown in the Figure draw, [13]

- Sectional front view along the section AA
- Top view
- Left hand side view

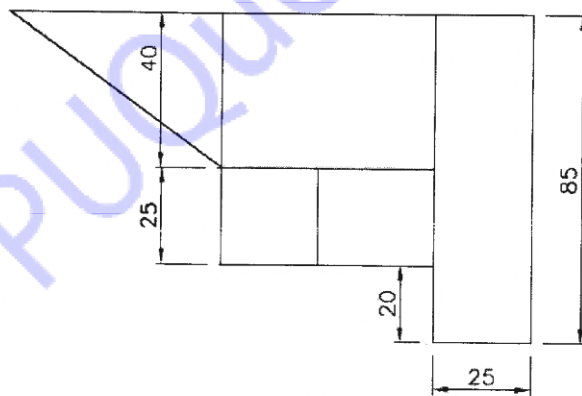
Place all necessary dimensions. Use first angle method of projections.



Q7) Figure shows front view and top view of an object. Draw Isometric view and show overall dimensions. [12]



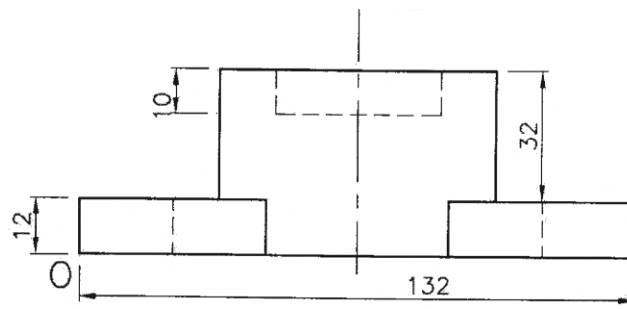
FRONT VIEW



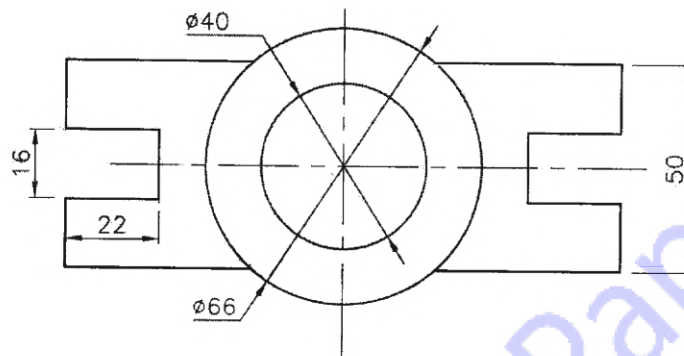
TOP VIEW

OR

Q8) Figure shows front view and top view of an object. Draw Isometric view and show overall dimensions. **[12]**



FRONT VIEW



TOP VIEW



Total No. of Questions : 8]

SEAT No. :

P4403

[Total No. of Pages : 3

[5458]-110

F.E.

ENGINEERING GRAPHICS - I

(2015 Pattern)

Time : 2 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) Solve Q.1 or Q.2, Q.3 or Q.4 , Q.5 or Q.6, Q.7 or Q.8.
- 2) Neat diagrams must be drawn, wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Use of electronic pocket calculator is allowed.
- 5) Assume suitable data, if necessary.

Q1) The point M of line MN is in HP while its other end N is 50 mm above HP and 80 mm in front of VP. The line is inclined to VP at an angle of 30° . Draw the projections of a line if its elevation makes 29° with HP. Find true length of line and the inclination made by the line with HP. Also, locate the traces of line. [12]

OR

Q2) Pentagonal plate of 25 mm side has one of its side in the VP & parallel to HP. The surface of plate makes an angle of 30° with VP. Draw its projections & find inclination of plate with HP. [12]

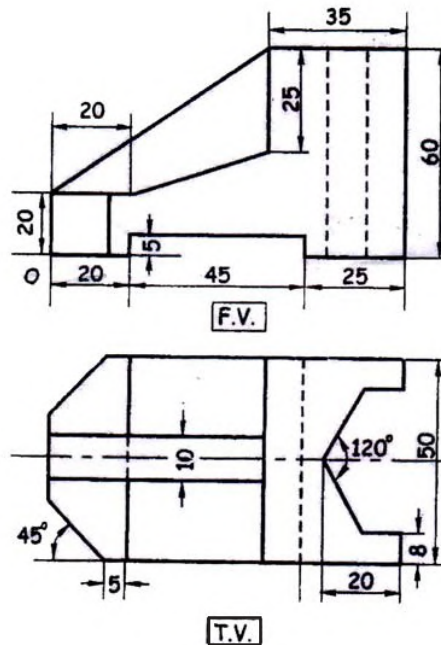
Q3) A square prism, side of base 40 mm and height 80 mm is kept on the HP on one of its corner of base edge in such a way that its axis makes an angle of 35° to the HP and VP. Draw the projection of the prism. [13]

OR

- Q4)** a) Draw a parabola by focus directrix method if focus is 60 mm from directrix. [7]
- b) Draw the development of hexagonal prism with base side 25 mm and axis height 60 mm. [6]

P.T.O.

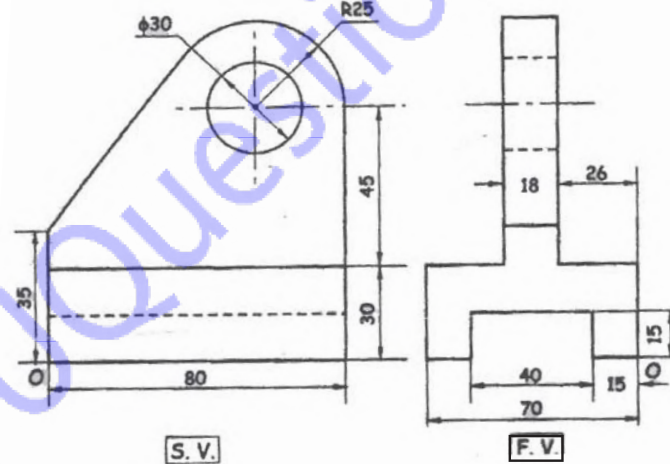
Q7) Figure shows front view & top view of object, Draw isometric view & show overall dimensions. [12]



(All dimensions are in mm.)

OR

Q8) Figure shows front view & right hand side view of object, Draw isometric view & show overall dimensions. [12]



(All dimensions are in mm.)

Total No. of Questions—8]

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[5558]-107

**F.E. EXAMINATION, 2019
ENGINEERING GRAPHICS—I
(2015 PATTERN)**

Time : 2 Hours

Maximum Marks : 50

Instructions:

1. Solve Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.
2. Use only half imperial size drawing sheet as answer book.
3. Retain all construction lines.
4. Assume suitable data if necessary.

- Q.1** A line AB 90mm long, having its endpoint A is on HP and 20 mm in front of VP. The Plan length of the line AB is 70 mm and makes an angle of 40° with VP. Draw the Projections of line AB. Find the inclinations made by the line with HP and VP Also locate its traces. **12**

OR

- Q.2** A circular plane lamina having diameter 60 mm is resting on one of its Circumferential point on HP in such a way that its plan appears as an ellipse having a major axis 60 mm long and minor axis is 40mm. Draw the projections, if the plan of the minor axis makes an angle of 40° to the VP. **12**

- Q.3** A pentagonal pyramid having base edge 40 mm and axis 80 mm long is resting on HP on one of its base edge in such a way that the axis of the solid makes an angle of 50° to HP and the base edge on the HP makes an angle of 20° to VP, draw the projections of the solid when its apex is towards the observer. **13**

OR

- Q.4** A Draw a cycloid of the rolling circle of diameter 55 mm along a straight line for one convolution and consider the starting point is farthest from the ground **07**

P.T.O.

- B** Draw the development of lateral surface for a pentagonal prism having a base edge 30 mm and axis height is 80 mm 06

Q.5 Figure shows a pictorial view of an object. By using first angle method of projections, draw; 13

- Draw the FV in the direction of X, [04]
- Top View [04]
- Sectional RHSV along the section line A-A for Figure A. [04]
- Overall Dimensions [01]

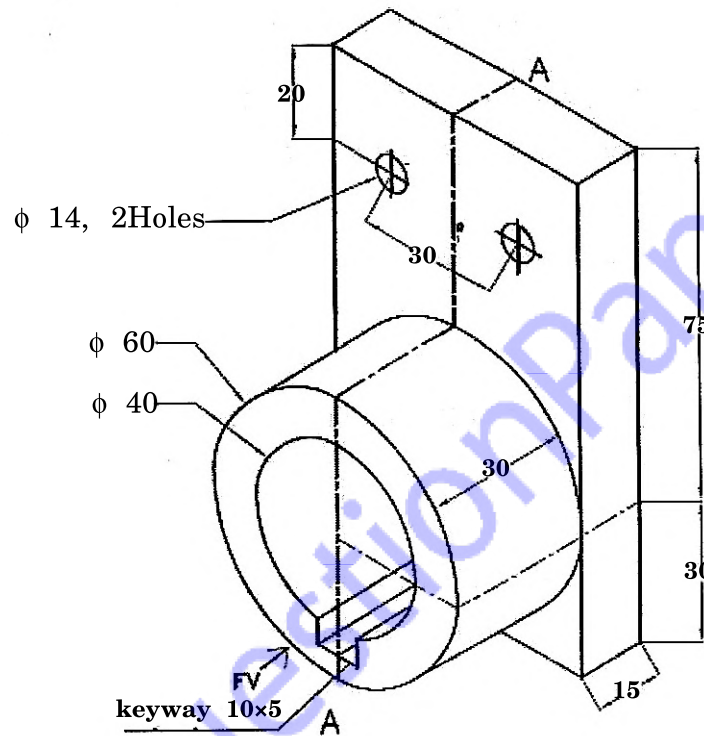


Fig. A

OR

Q.6 Figure shows a pictorial view of an object. By using first angle method of projections, draw; 13

- Draw the sectional FV along cutting plane line A-A, [04]
- Top View, [04]
- LHSV for figure B given below [04]
- Overall Dimensions [01]

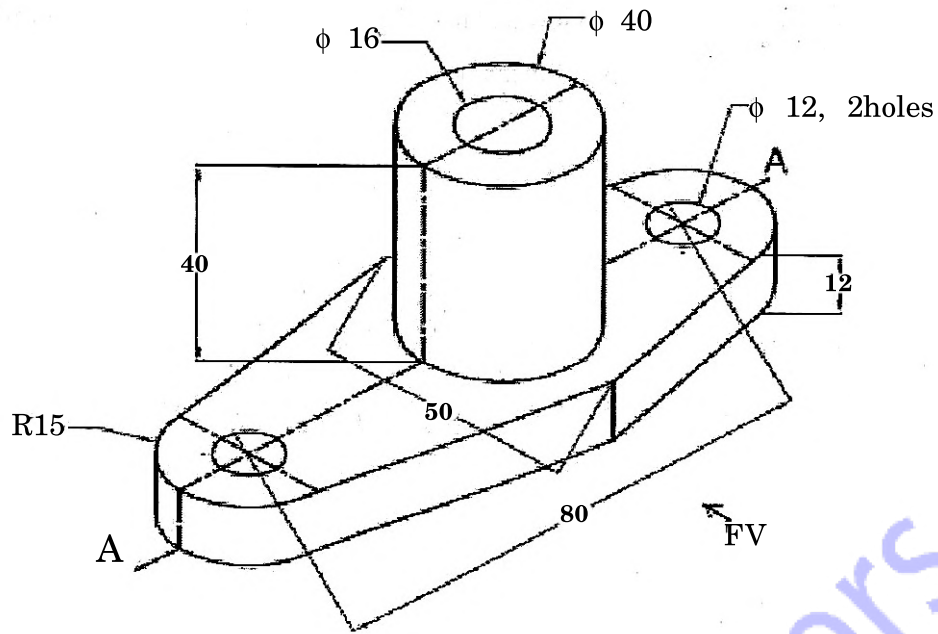


Fig. B

Q.7

Figure C shows the FV and SV of a bracket. Draw the isometric view and show the overall dimensions.

12

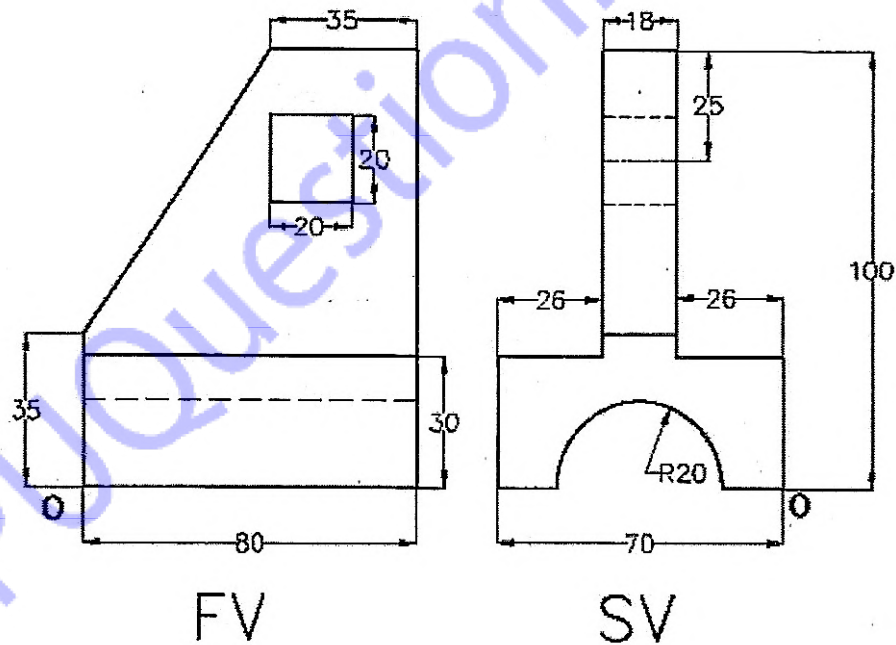


Fig. C

OR

Q.8

Figure D shows the front view and top view of an object. Draw an isometric view and show the overall dimensions

12

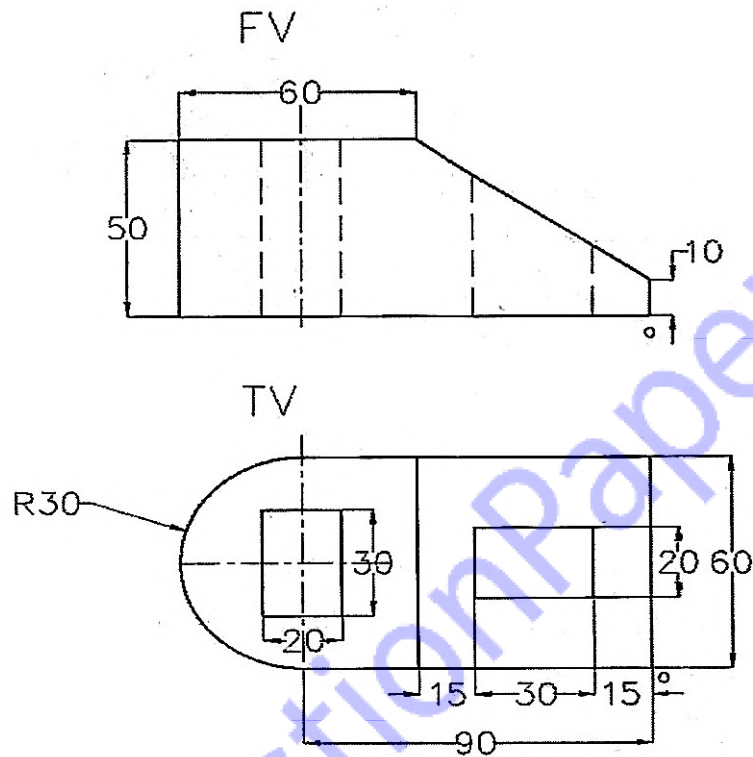


Fig. D

!!All the Best!!

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[5667]-110

F.E. EXAMINATION, 2019
ENGINEERING GRAPHICS—I
(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Solve Q. 1 or Q. 2, Q. 3 or Q. 4, Q. 5 or Q. 6,
Q. 7 or Q. 8.

(ii) Use only half imperial size drawing sheet as answer book.

(iii) Retain all construction lines.

(iv) Assume suitable data, if necessary.

1. A line AB having its end point A is 15 mm above HP and 90 mm in front of VP, while point B is 50 mm above HP and 30 mm in front of VP. Draw the projections of the line if the projector distance between the point A and B is 80 mm. Find the Angle made by the line with HP and VP, Angle made of elevation line and plan line with HP and VP and true length, elevation length and plan length of the line. [12]

Or

2. A rectangular plate, 50 mm × 75 mm, is resting in HP on its smaller side. Its surface is inclined to HP at an angle of 40°, draw the projections, if its resting side is inclined to VP at an angle of 20°. Find the inclination made by the plane with VP. [12]

P.T.O.

- $$Or$$

- Draw :

-

[5667]-110

Or

6. Figure 2, shows a pictorial view of an object. By using first angle projection method. [13]

Draw :

- (i) Front view in the X direction
- (ii) Top View
- (iii) Left Hand Side View (LHSV).

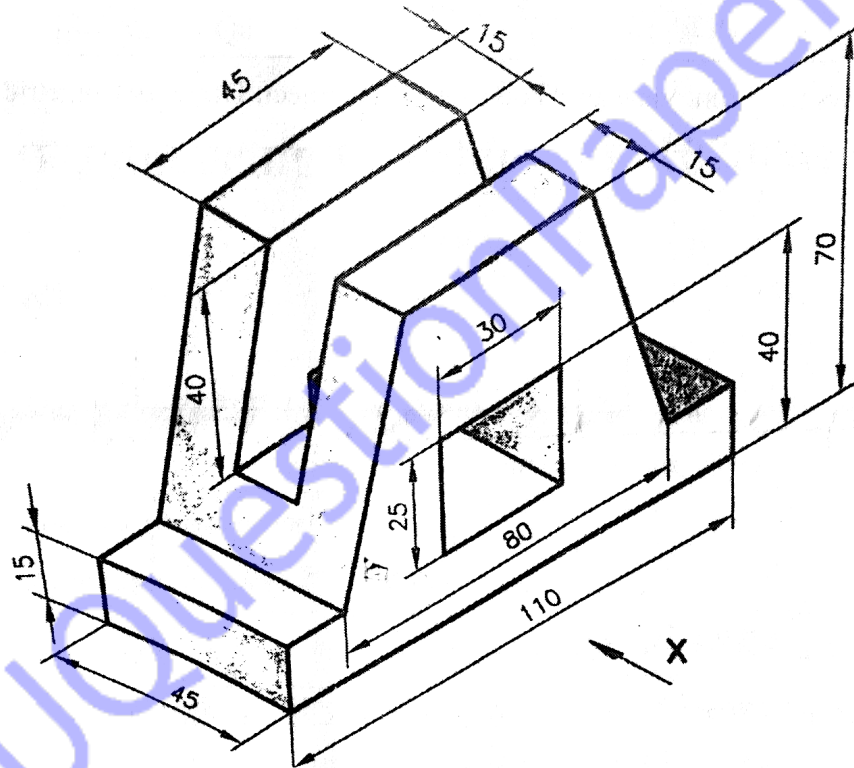


Figure 2

7. Figure 3 shows the Front view and Left hand side view of an object. Draw its Isometric view. [12]

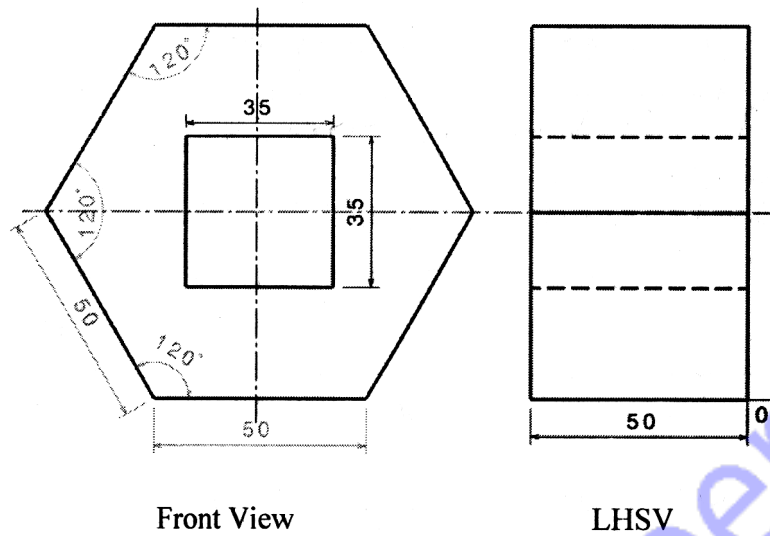


Figure 3

Or

8. Figure 4 shows the Front view and Top view of an object. Draw its Isometric view. [12]

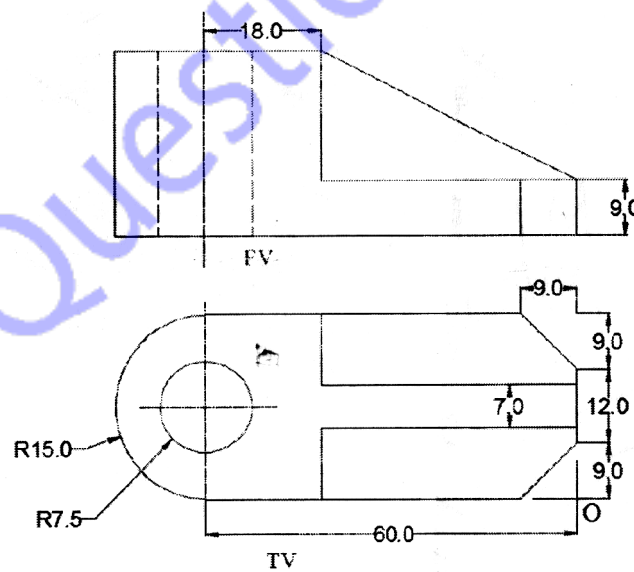


Figure 4