PRACTICAL / ASSIGNMENT UNIT-1

Q.1. Write the name of any four lines used in engineering drawing with figure.

OR

Drawing object showing different types of line used in engineering drawing.

Ans:

Lines	Description	General Applications
A	continuous thick	Visible outlines Visible edges
B	continous thin (straight / curve)	Imaginary lines of intersection Dimension lines Projection lines Leader lines Hatching or section lines outlines of revolved sections in plane short centre lines
C	continous thin (free-hand)	Limits of partial or interrupted views and sections Short-break lines
D	continous thin (straight with zigzags)	Long-break lines
E	Dashed thick	Hidden outlines Hidden edges
F	Dashed thin	Hidden outlines Hidden edges
G	Chain thin	Centre lines Lines of symmetry Trajectories
H	Chain thin, thick at ends and [illegible] direction	cutting planes
J	Chain thick	Indication of lines or surfaces to which a special treatment applies
K	Chain thin double-dashed	outlines of adjacent parts Alternative and extreme positions of movable parts Centroidal lines Parts situated in front the cutting plane

Q.2. Explain chain dimensioning and parallel dimensioning with the help of suitable diagram.

OR

Explain the method of placing dimensions from following method given.

a. Chain dimensioning
b. parallel dimensioning
c. progressive dimensioning
d. combined dimensioning.

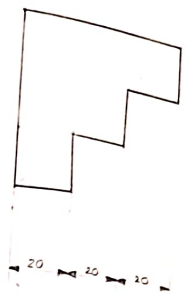
Ans: a) **Chain dimensioning:-** Dimensions are arranged in straight line.

b) **Parallel dimensioning:-** All the dimensions are shown from a common base line. The smaller dimensions is placed nearer the view.

c) **Combined Dimensioning:-** Chain and parallel dimensioning used simultaneously.

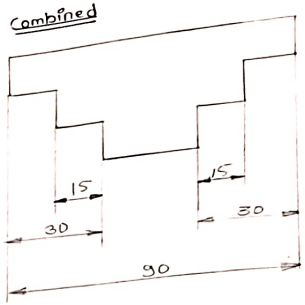
d) **Progressive Dimensioning:-** One datum or surface is selected with steads as zero. All the dimensions are referred to that.

Chain

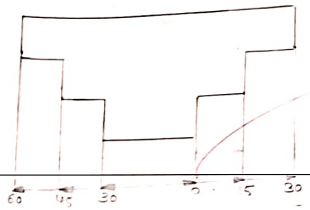


Parallel

Combined

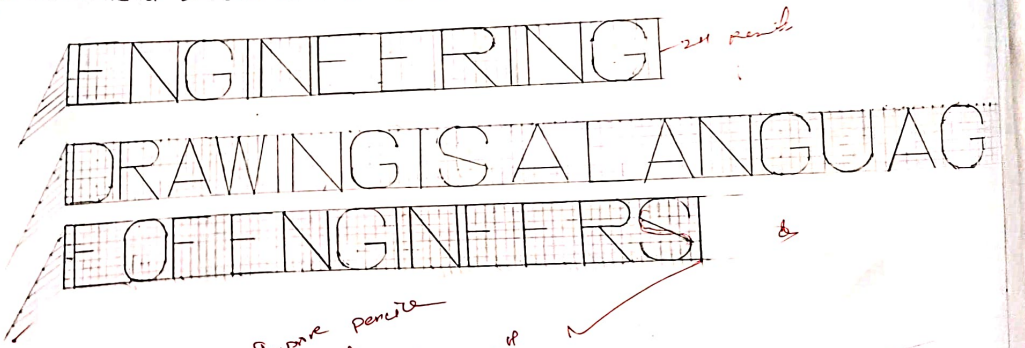


Progressive



Q3. Write the following words in single stroke vertical capital letter of height 20 mm.

(a) ENGINEERING DRAWING IS A LANGUAGE OF ENGINEERS.



Improve pencil work
for dark line use H pencil
for construction line use 2H pencil

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b. ENTREPRENEURSHIP DEVELOPMENT

ENTREPRENEURSHIP

DEVELOPMENT

c. MECHANICAL ENGINEERING

MECHANICAL

ENGINEERING

Q(4) Draw any object and show below lines in the object.

a. Dimension line
b. Extension line
c. Centre line
d. Leader or pointer line
e. Hidden line
f. Construction Line

Ans:- a) Dimension line :- The thin solid line with arrowheads at both ends, indicating the length the length of a dimension between two points on the objects.

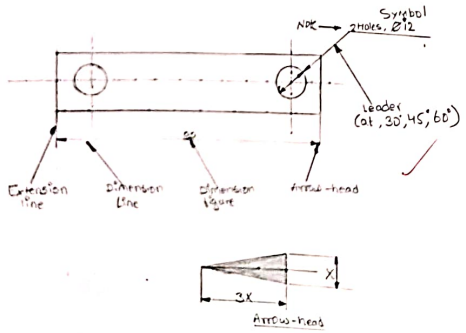
b) Extension line :- The thin solid lines extending from the object edges to just beyond the dimension line arrowheads, providing a clear reference point for the dimension.

c) Centre line :- The dashed line (usually with longer dashes than hidden lines) through the centre of a symmetrical object, indicating its axis of symmetry.

d) Leader or pointer line:- The thin continous line with an arrowhead pointing to a specific feature or annotation on the drawing, often used to explain or label details.

e) Hidden Line :- The short dashed line representing edges or features of the object that are not visible in the current view but exist behind or within the object.

f) Construction line:- Light, thin, dashed line used for contruction purpose during the drawing process, often erased before finalizing the drawing.

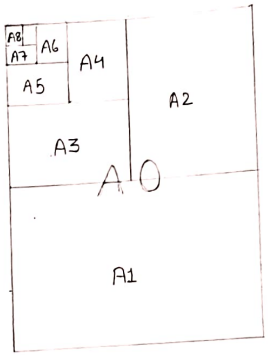


Do the drawing sheet use pencile only.

Q5 Write dimensions of various sizes of paper.

Ans.

A4	210 x 297
A3	297 x 420
A2	420 x 594
A1	594 x 841
A0	841 x 1189



Q6. List the instrument used in engineering drawing.

Ans:- 1. Drawing Board.
2. Drawing sheet
3. Drawing sheet Holder
4. Set-squares - 45° and 30°-60°
5. Large size compass
6. small bow compass
7. Large Size Divider
8. Small bow Divider
9. Scales - 6" and 12"
10. Protractor
11. French Curve
12. Drawing Pencil - H, 2H, HB
13. Sand Paper
14. Eraser (Rubber)
15. ~~Drawing pins and clips~~
16. Cello tape
17. Duster or Handkerchief
18. Drafting Machine / Mini Drafter
19. Sketch Book (Medium size)
20. Roller Scale
21. pencil Sharpener
22. Sheet Folder.

Q.7. Show aligned system and Unidirectional system of dimensioning with the help of Diagram.

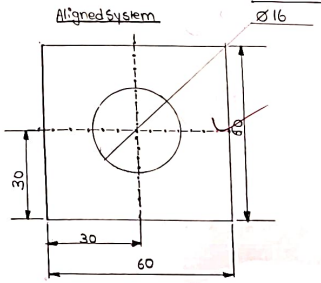
Ans:- 1. Aligned System:- All the dimensions are so placed that they may read from the bottom or the right hand edges of the drawing sheet.

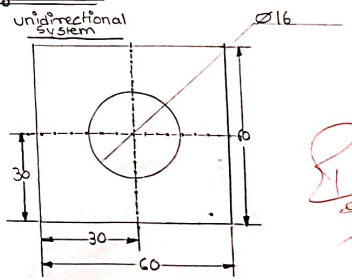
All the dimensions are placed normal and above the dimension line.
Commonly used in Engineering drawing.

2. Unidirectional System:- All the dimensions are so placed that they may read from the bottom edge of the drawing sheet.

Dimension lines are broken near the middle for inserting the dimensions
Commonly used on large drawing - aircrafts, automobiles.

System of Placing Dimensions





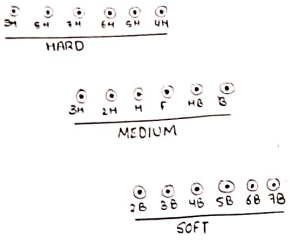
Q8. Write the types and use of various types of pencil.

Ans:-

9H - 6H	Extra hard
5H - 4H	Hard
3H - 2H	Medium hard
H & F H	Medium soft
2B - 7B	Soft

Grade of pencil (lead) and their application

TASK	LEAD
CONSTRUCTION LINES	3H, 2H
GUID LINES	5H, 2H
LETTERING	H, F, HB
DIMENSION LINES	2H, H
LEADER LINES	2H, H
HIDDEN LINES	2H, H
CRUSHING LINES	2H, H
CENTRELINES	2H, H
SECTION LINES	2H, H
STITCH LINES	2H, H
LONG BREAK LINES	2H, H
VISIBLE LINES	H, F, HB
CUTTING PLANE LINES	H, F, HB
EXTENTION LINES	2H, H
FREEHAND BREAK LINES	H, F, HB



Q9. What is RF? and different types of scaling in engineering Drawing ~~explain with example?~~

Ans:- • Definition:- The Representative Fraction (RF) is the ratio of the length on a drawing to the actual length of the object.

- Formula:- RF = Drawing Length / Actual Length
- Purpose:- It expresses the scale used to represent the object in a drawing.

Examples of RF:

- 1:1 (Full Size): The drawing is the same size as the actual object
- 1:10 (Reducing scale): one unit on the drawing represents 10 units of the actual object.
- 10:1 (Enlarging scale): one unit on the drawing represents 10 units of the actual object.

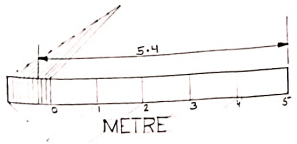
Types of Graphical Scale

1. Plane Scale
2. Diagonal Scales
3. Vernier Scales
4. Comparative Scales
5. Scales of Chord.

SCALE

Q.1. Construct a Plain Scale of 1/60 to read metre and to decimeter and long enough to measure upto 6 metre. shown on it a distance of 5.4 metre.

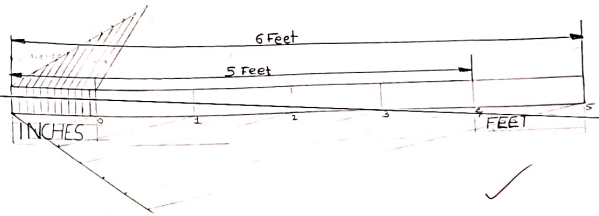
Ans:-
- R.F. = 1/60
- Maximum Length = 6m
- Length of Scale = R.F. x Maximum length
  = 1/60 x 6m
  = 1/60 x 6 x 10 x 10 cm
  = 10 cm



R.F. = 1/6

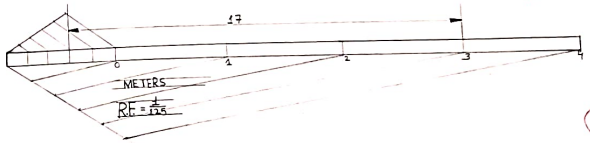
Q.2. Construct a scale of 1.5 inches = 1 foot to show inches and feet and long enough to measure up to 6 feet. also show a distance of 5 feet and 6 feet.

Ans:-
- Scale 1.5 inches = 1 feet
- Maximum length = 6 feet
- Length of Scale = R.Scale x Maximum length.
  = 1.5 x 6 = 9 inches.



Q3. In a drawing 3.2 cm long line represents a length of 4 metres. Find R.F. and construct a scale to measure length upto 25 meters. Show on it units of meter and 5 meters. Show the length of 17 meters on it.

Ans:-
- R.F. = Length of drawing / Actual length
  = 3.2cm / 4m = 3.2cm / 4x10x10cm = 1/125
- Maximum length = 25M
- Length of Scale = R.F x Maximum length.
  = 1/125 x 25m = 1/125 x 25 x 10 x 10 cm
  = 2500/125 = 20cm.



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Q.4. The distance between Raipur to Bilaspur is 100km and in the map 1 cm represents 5 km. If what is R.F. here? Draw a plain scale long enough to measure distance between Raipur to Bilaspur.

Ans:- R.F. = $\frac{1\text{cm}}{5\text{km}}$

$= \frac{1\text{ cm}}{5\times10\times10\times10\times10\times10\text{ cm}}$

$= \frac{1}{500000}$

- Maximum length to be measured = 100 km
- Length of scale = R.F. × Maximum length

$= \frac{1}{500000} \times 100\times10\times10\times10\times10\times10\text{ cm}$

$= \frac{100}{5}\text{ cm}$

$= 20\text{ cm}.$

Q.5. The distance between Delhi ang Agra is 200 km. In a railway map it is represented by a line 5 cm long. Find in R.F. Draw a diagonal scale to show single km. and maximum 600 km. Indicate 222 km on it.

Ans:- R.F. = $\frac{\text{Length of drawing}}{\text{Actual length.}}$

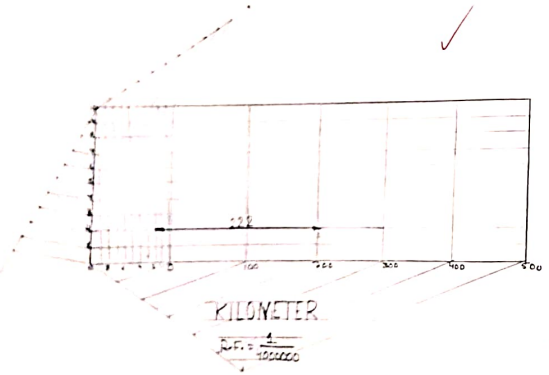
$= \frac{5\text{cm}}{200\text{km}} = \frac{5\text{ cm}}{200\times100\times100\text{cm}} = \frac{5\text{cm}}{2000000\text{cm}}$

$R.F. = \frac{1}{4000000}$

- Maximum length = 600 km.
- Length of scale = $\frac{1}{4000000} \times 600$ km.

$= \frac{1}{4000000} \times 600\times10\times10\times10\times10\times10\text{ cm}$

$= \frac{600}{4} = 15\text{ cm}$



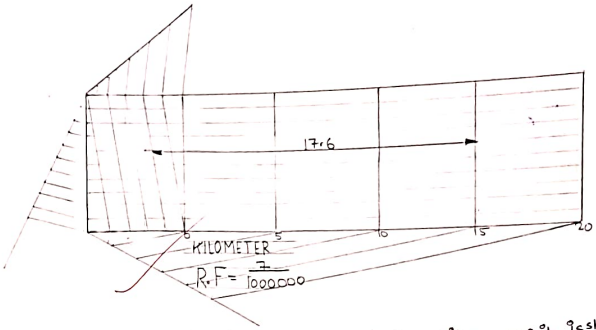
A-B = 222 km

Q.6. On a map, the distance two stations P and Q is 14 cm. The real distance between them is 20 km. Draw a diagonal scale of this map to read kilometres and to measure upto 25 km. Show a distance of 17.6 km on this scale.

Ans. R.F. = $\frac{\text{Length of Drawing}}{\text{actual length}} = \frac{14\text{cm}}{20\text{km}} = \frac{14\text{ cm}}{20\times10\times10\times10\times10\times10\text{ cm}} = \frac{14}{2000000} = \frac{7}{1000000}$

- Maximum Length = 25 km
- Length of scale = R.F. × Maximum Length = $\frac{7}{1000000} \times 25\text{ km} = \frac{7}{10000000} \times 25\times10\times10\times10\times10\times10\text{ cm}$

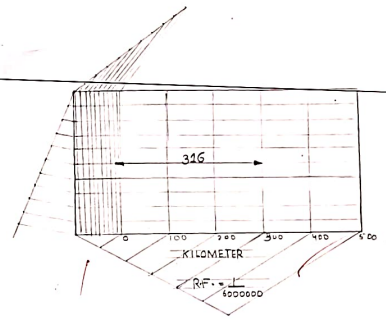
$= 17.5\text{ cm}$



Q.7. The distance of Raipur to Mumbai is 600 km and in the railway map it is shown by a 10 cm line. what is the R.F. here? Draw a diagonal scale and show a distance of 316 km in it.

Ans- R.F. = $\frac{\text{Length of Drawing}}{\text{actual length}} = \frac{10\text{cm}}{600\text{km}} = \frac{10\text{cm}}{600\times10\times10\times10\times10\text{cm}} = \frac{10}{60000000} = \frac{1}{6000000}$

- Maximum distance = 600 km
- Length of scale = R.F. × Maximum length = $\frac{1}{6000000} \times 600\times10\times10\times10\times10\times10\text{ cm} = 10\text{ cm}$

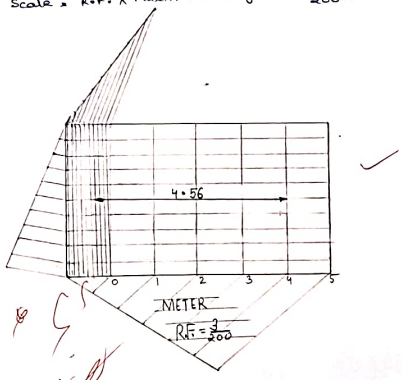


Q.8. For the measurement of meter, decimeter and centimeter, construct a diagonal scale whose representative fraction is 3:200 and the maximum distance that can be measured is 6 meters. Indicate the distance of 4.56 meter on this diagonal scale.

Ans- R.F. = 3:200

Maximum length = 6 meters.

Length of Scale = R.F. × Maximum length = $\frac{3}{200} \times 6\text{ meters} = \frac{3}{200} \times 6\times10\times10\text{ cm} = 9\text{ cm}.$



Practical

Assignment No. – 02

UNIT- 02 Engineering Curves

Q.1 What are the types of curves ?

Ans:- 1. Conic section curves
- a. Ellipse
- b. Parabola
- c. Hyperbola

2. Cycloid
- a. Hypocycloid
- b. Epicycloid

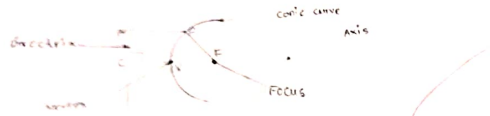
Q.2. Draw a free hand conic curve and show the following.

Ans. a) Directrix.
- Fixed straight line is called as directrix

b) Focus
- Fixed point is called as focus.

c) vertex
- The line passing through focus & perpendicular to directrix is called as axis.

d) Axis.
- The intersection of conic curve with axis is called as vertex.



Q.3 Define eccentricity and write the eccentricity of ellipse and parabola..

Ans: ~~Eccentricity e is the ratio of distance of the point from the focus to the distance of the point from the directrix.~~

Therefore,

$$\text{Eccentricity} = \frac{\text{Distance of point from the focus.}}{\text{Distance of the point from the directrix}}$$

It is always less than 1 for ellipse, equal to 1 for parabola and greater than 1 for Hyperbola

A) For Ellipse $E < 1$

B) For Parabola $E = 1$

Q.4: Write the name of methods to draw an ellipse.

Ans; Method to draw ELLIPSE
- a) General Method (Directrix - Eccentricity Method)
- b) Concentric Circle.
- c) Oblong Method
- d) Arcs of Circle Method

Q.5. Give any two differences between ellipse and Hyperbola.

Ans:- Ellipse :- a.) An ellipse is a closed curve.
- b.) Where the sum of the distances from any point on the curve to two fixed points (foci) is constant.
- c.) Its eccentricity (a measure of how much the conic section deviates from being a circle) is between 0 & 1.

Hyperbola :- a.) A hyperbola consists of two separate, open curves.
- b. Where the sum of the distances from any point on the curve to two fixed points (foci) is constant.
- c. Its eccentricity is greater than 1.

Q.6. Define parabola and also write the name of methods to draw parabola.

Ans: A hyperbola consists of two separate, open curves where the absolute ~~diff~~ difference of the distances from any point on the curve to the two fixed points (foci) is constant.

Method to draw Parabola.
- a. General Method (Directrix – Eccentricity method)
- b. Tangent Method
- c. Rectangle Method.

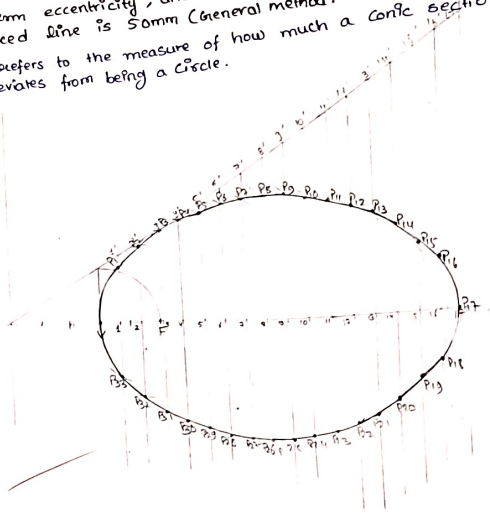
Q.7. Define ellipse.

Ans:- An ellipse is a closed curve where the sum of the distances from any points on the curve to two fixed points (foci) is constant.

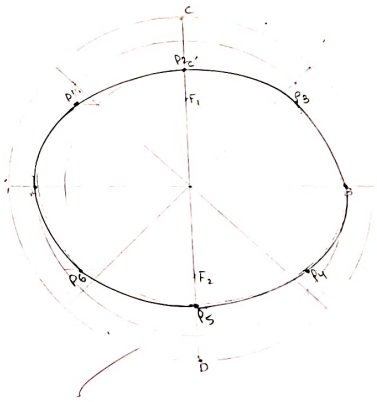
Long Answer

Q.1 Define the term eccentricity, and construct a ellipse whose eccentricity is 2/3 and distance from the fixed line is 50mm (General method.

Ans Eccentricity refers to the measure of how much a conic section (like an ellipse, parabola, or hyperbola) deviates from being a circle.



Q.2 construct a ellipse whose major axis is 100mm and distance between focus is 60mm using concentric method.



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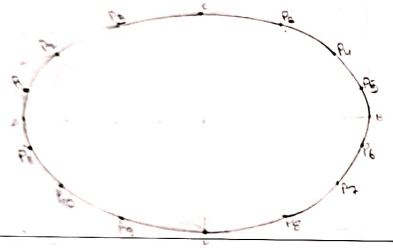
Q.3. Draw an ellipse whose minor by arce of circle method having major axis 90 mm and minor axis 50 mm.

Q.4. Construct a ellipse whose major and minor axis are 120 mm and 80 mm respectively by using Rectangle Method.

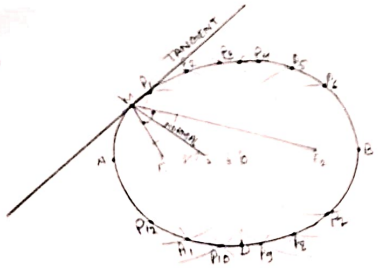


Q.5. An artificial satellite is orbiting around the earth. The major axis of its orbit is 40000 km & minor axis is 30000 km. draw the orbit of satellite & position of earth. Assuming that it is on one of the foci. draw tangent and normal at 10000 km away from the earth centre.

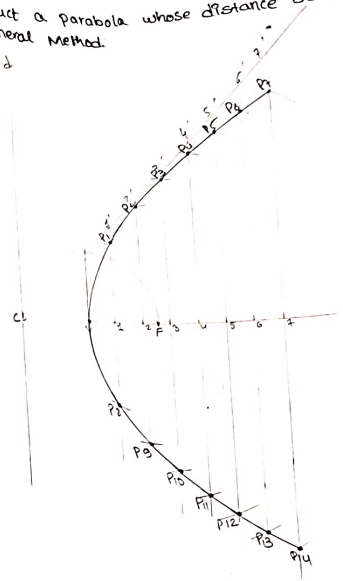
Given that
major axis = 40000 km minor axis = 30000

Scale 1 cm = 5000

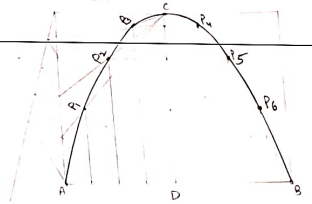
major axis = 40000/5000 = 8cm or 80 mm
minor axis = 30000/5000 = 6cm or 60 mm



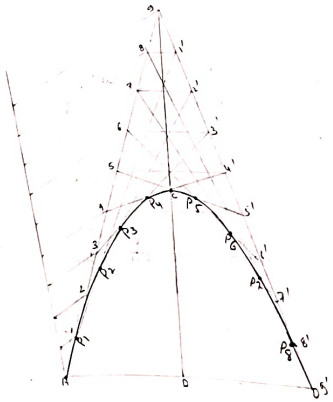
Q.6. Construct a parabola whose distance beetween focus and fixed line is 50 mm
General Method



Q.7. Inscribe a parabola in a rectangle having sides 60mm and 80 mm respectively.



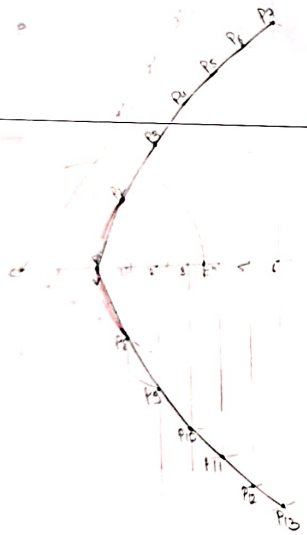
8. Inscribe a parabola in a having sides 60mm and 80mm respectively using tangent method.



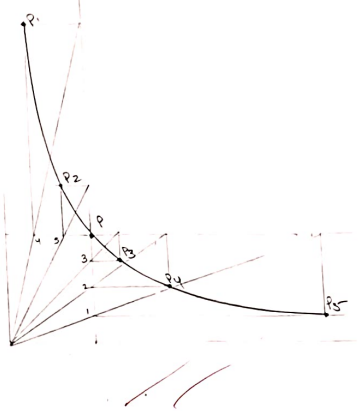
Q9. A ball thrown up in the air reaches a maximum height of 150 meters. and travels a horizontal distance of 300 meters. Trace the path of the ball and name the obtained. Draw using Tangents method.

100 → 10 cm
150 → 50 mm

Q.10 construct a hyperbola whose eccentricity is 3/2 and distance from the fixed line is 50mm.



Q.11. Point P is 40mm and 30mm from horizontal and vertical axes respectively. Draw Hyperbola through P.



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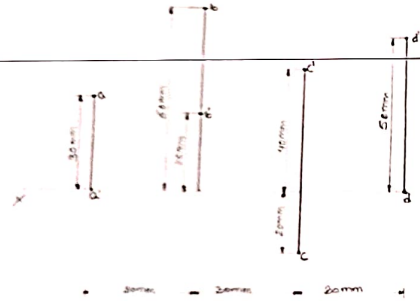
Practical Assignment Unit - 03.

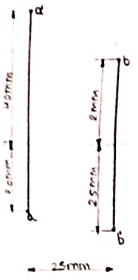
Projection of Point

1. Draw the projection of the following points
(i) A, in the HP and 25 mm behind the VP.
(ii) B, 25mm below the HP and 40mm behind the VP.
(iii) C, 15 mm above the HP and 50mm behind the VP.
(iv) D, in the VP and 40mm above the HP.
(v) E, 40mm above the HP and 25mm in front of the VP.

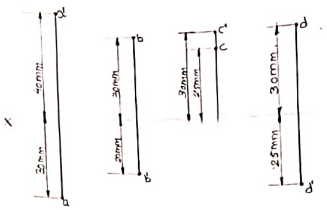
Q2. Draw the projections of the following points keeping the projections 30 mm apart;
(i) Point A, in the HP and 30 mm behind the V.P.
(ii) Point B, 25mm above HP and 60mm behind VP.
(iii) Point C, 40mm above the H.P and 20 mm in front of the V.P.
(iv) Point D, in the VP. and 50mm above the HP.



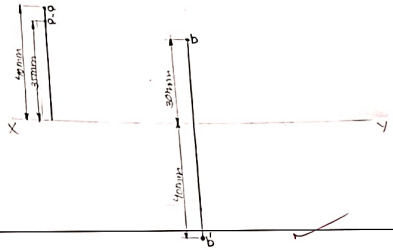
Q3. Draw the projection of the following points on same reference line keeping projectors 25mm apart.
(i) Point A, 40 mm above HP, and 20mm in front of V.P.
(ii) Point B, 25 mm below HP, and 25mm behind V.P.



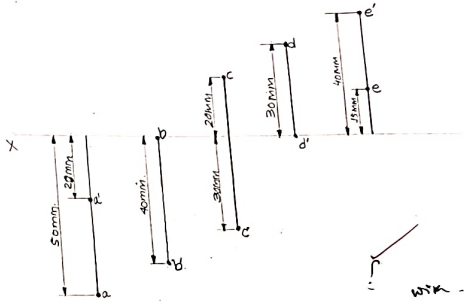
Q.4 Draw the projection of the following points!
(a) 30 mm in front of VP and 40mm above the HP.
(b) 20mm below HP, And 30mm infront of the VP.
(c) 25mm behind the VP and 30mm above the HP.
(d) 30mm behind the VP and 25mm below the HP.



Q.5. Draw the projection of given point, if;
(i) Point 'A' is situated at 35 mm above the H.P. and 40mm behind the VP.
(ii) Point B' is situated at 40 mm below the H.P. and 30mm behind the VP.



Q.6 Projections of various points are given in figure state the position of each point with respect the planes of projections.



Ans i) A, 20mm below HP and in front of 50mm VP.
ii) B, in the VP and 40 mm below the HP.
iii) C, 30mm below HP and 20mm behind VP.
iv) D, in the HP and 30 mm behind VP
v) E, 40 mm above HP and 15 mm behind VP.

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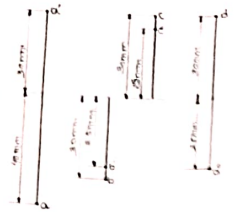
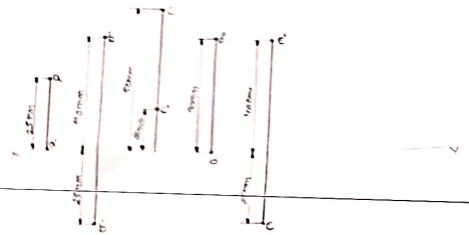
Q.1. Draw the projection of the following
(a) 40mm in front of VP and 30mm above the HP
(b) 25mm below the HP and 30mm in front of the VP.
(c) 20 mm behind the VP and 25 mm above the HP.
(d) 30mm behind the VP and 25 mm below the HP.

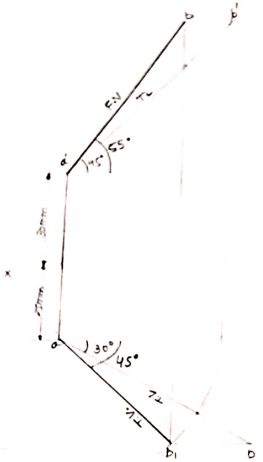


Q. Draw the projections of the following points.
i) A, in the HP and 25 mm behind the VP
ii) B, 25mm below the HP and 40mm behind the VP
iii) C, 35mm above the HP and 50mm behind the VP.
iv) D, in the VP and 40mm above the HP.
v) E, 40mm above the HP and 25mm in front of the VP.



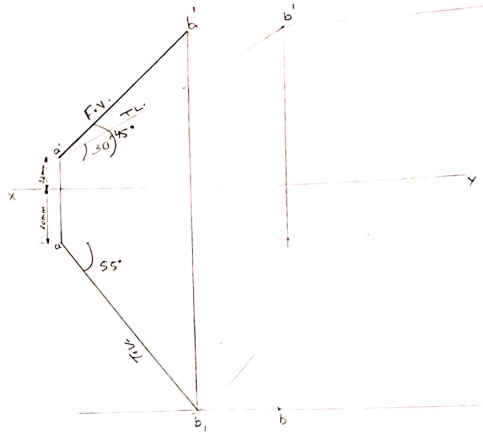
Projection of Line

1. Draw the projection of a line AB 70mm long, which is inclined at 45° to HP and 30° to VP. Its one end A is 30mm above the HP and 25mm in front of the VP.



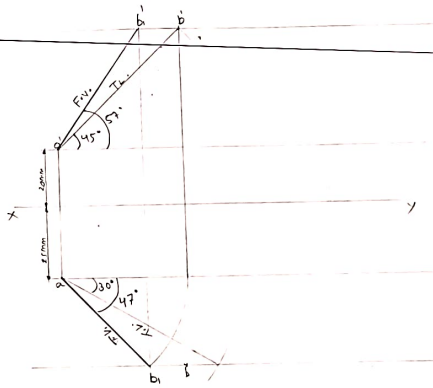
$\alpha = 55°$
$\beta = 45°$
$\phi = 30°$
$\theta = 45°$
$TL = 70mm.$

Q.2 - A line AB, 50mm long, is inclined at 30° to the H.P. its end A is 12mm above the H.P. and 20mm in front of the V.P. Its front view measures 65mm. Draw its projection.



$\theta = 30$
$\alpha = 45°$
$\beta = 55°$
$TL = 90°$
$FV = 65mm$
$TV = 70mm$

Q.3 - Draw the projection of a line AB 60 mm long, which is inclined at 45° to HP and 30° to VP. Its one end A is 20mm above the HP and 25 mm in front of the VP.

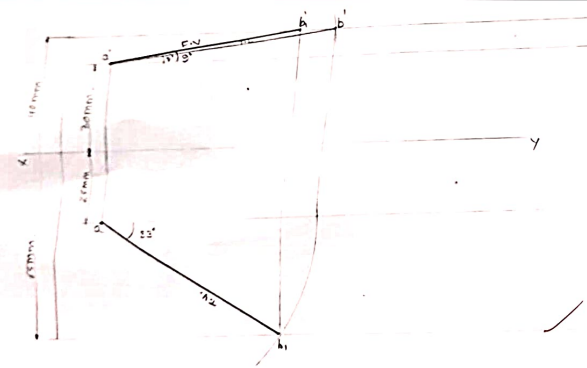


$\theta = 45°$
$\phi = 30°$
$\alpha = 57°$
$\beta = 47°$
$TL = 60mm$
$FV = 50mm$
$TH = 42mm$

Q.4. A line AB 65 mm long, has its end A 20 mm above the H.P. and 25mm in front of V.P. The end B is 40 mm above H.P, and 65mm in front of V.P. Draw the projections of AB and show its inclinations with H.P and V.P.

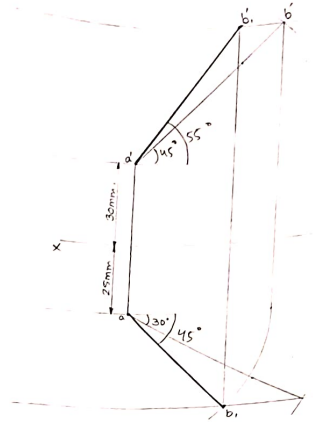
T.L. = 65mm
F.V = 51mm
T.V = 63mm.
$\theta = 19°$
$\alpha = 24°$
$\beta = 40°$

Q.5. A line AB, 75mm long, has its end A 30mm above the H.P and 25mm in front of the V.P. The end B is 40mm above H.P., and 65 mm in front of V.P. Draw the projections of AB and show its inclinations with H.P and V.P.



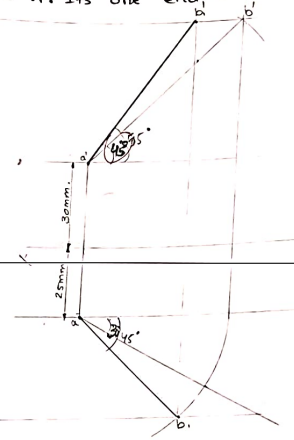
$\alpha = 9°$
$\beta = 33°$
$\theta = 7°$
F.V = 64mm
T.V = 75mm
T.L = 75mm

Q.6. Draw the projection of a line AB 70mm long, which is inclined at 45° to HP and 30° to V.P. Its one end A is 30mm Above the HP. and 25mm in front of the VP.



$\alpha = 55°$
$\beta = 45°$

Q.7. Draw the projection of line AB 70 mm long, which is inclined at 45° to HP and 30° to VP. Its one end, A is 30 mm above the HP and 25mm in front of the VP



$\alpha = 55°$
$\beta = 45°$

Q.8. A line AB 70 mm long, has its end A at 40 mm above HP and 15mm in front of VP. Its front view and the top view measure 50mm and 60mm respectively. Draw the projections of the line and determine its inclinations with HP and VP.

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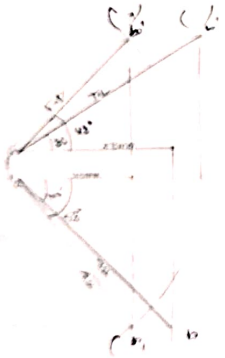
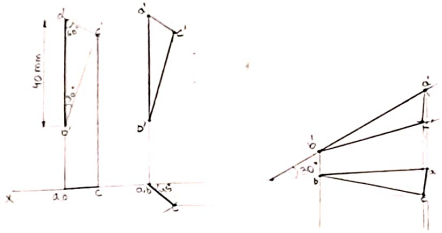
F.v = 50 mm
T.v = 65 mm
γ = 45°
ϕ = 30°
θ = 30°
α = 45°

Q.10. The front view and top view of a line measured 35mm and 65mm respectively. The end Projectors are 40mm apart and one end of line is 10mm above the HP and in the VP draw the projections and find the true length and true inclination of line.

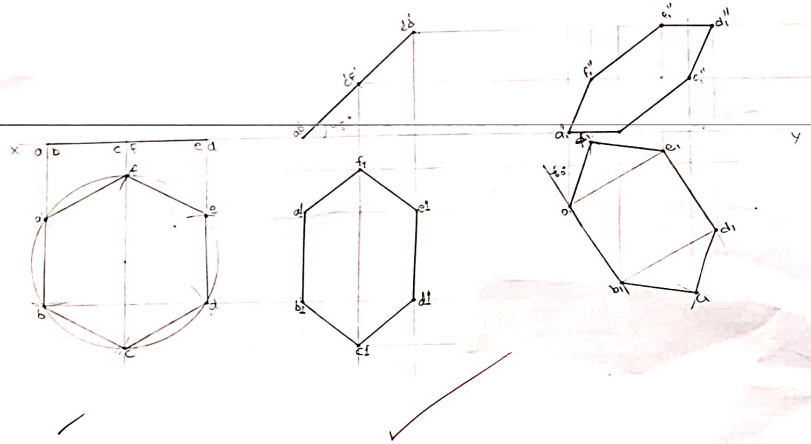


F.v = 55 mm
T.v = 65 mm
θ = 30°
ϕ = 44°
α = 43°
β = 53°
T.L = 75 mm

Q. A 30° - 60° set square of longer side 100 mm long is in the VP. and inclined at 30° to the HP while its surface makes an angle of 45° to the HP. draw the projection.



Q.11. A regular hexagonal ABCDEF of 30 mm side, having one of its sides in the the HP and inclined 60° to the VP. And its surface makes and angle of 45° with HP. Draw its projection.



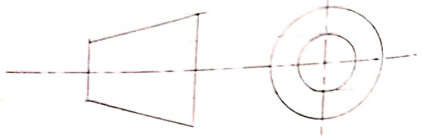
Unit 04

Practical Assignment 04

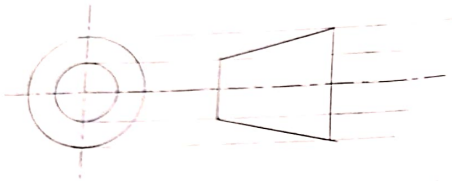
Orthographic Projection and Section of Solids.

Q1. Draw the symbol of first angle and third angle projection.

Ans: a) Symbol of first angle projection.



b) Symbol of third angle projection.



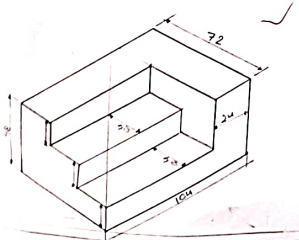
Q.2. Differentiate between first angle angle and third angle projection.

Ans:

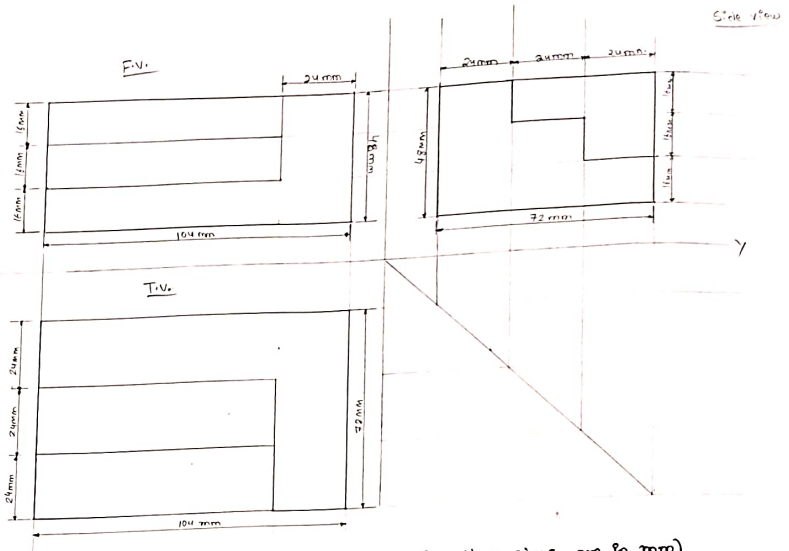
First angle Projection	Third angle projection.
1. The object is imagined to be in the first quadrant	1. The object is imagined to be in the third quadrant.
2. The object lies in between the plane of projection and observer.	2. The plane of projection lies in between the object and observer,
3. When views are drawn in their relative position, Top view comes below Front view, Right hand side view is drawn to the left side of the elevation.	3. When views are drawn in their relative position Top view comes above, Front view Right hand side view is drawn to the left right side of the elevation,
4. Is followed in India and European countries	4. Is followed in American countries.

Q.3. Draw following view of an object shown in fig. 4.25

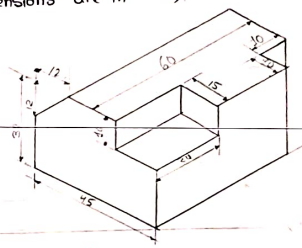
- Front view
- Top view
- Side view.

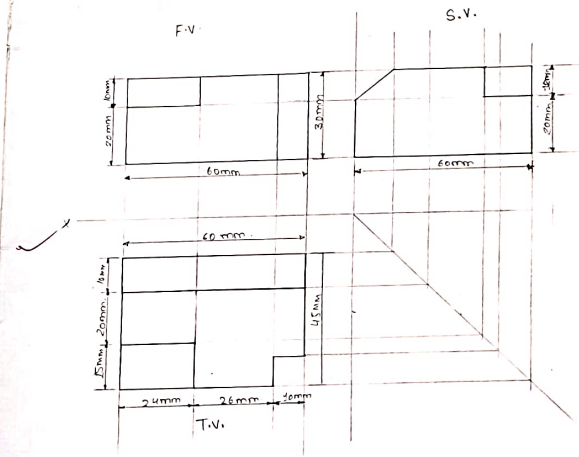


Solu:



Q. Draw the front view and top view of the given figure. (All diamensions are in mm)





very good

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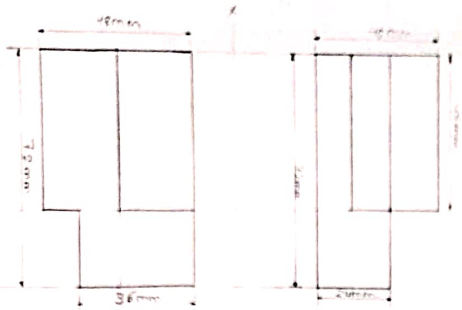
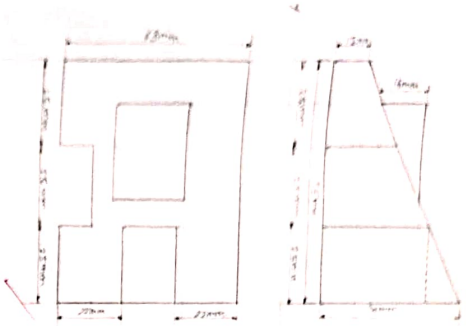
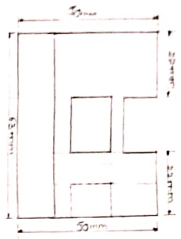
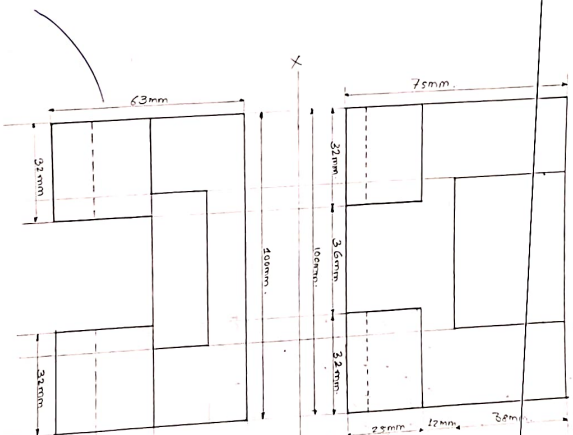
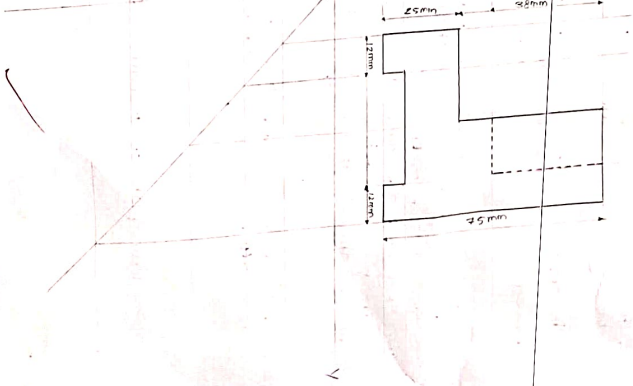

36mm

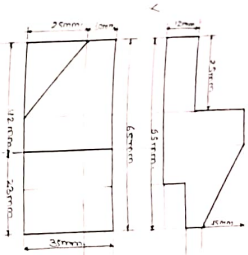


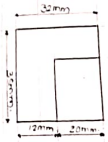

12mm
12mm
12mm

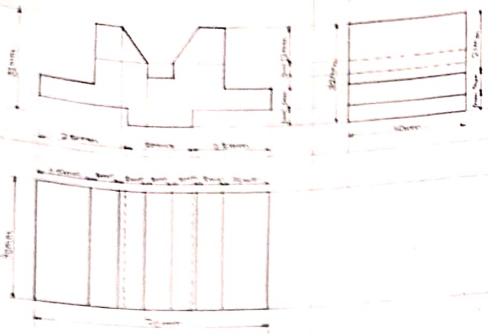

53mm
53mm


63mm
32mm
33mm
109mm
75mm
22mm
36mm
32mm
25mm
12mm
38mm


25mm
38mm
12mm
75mm

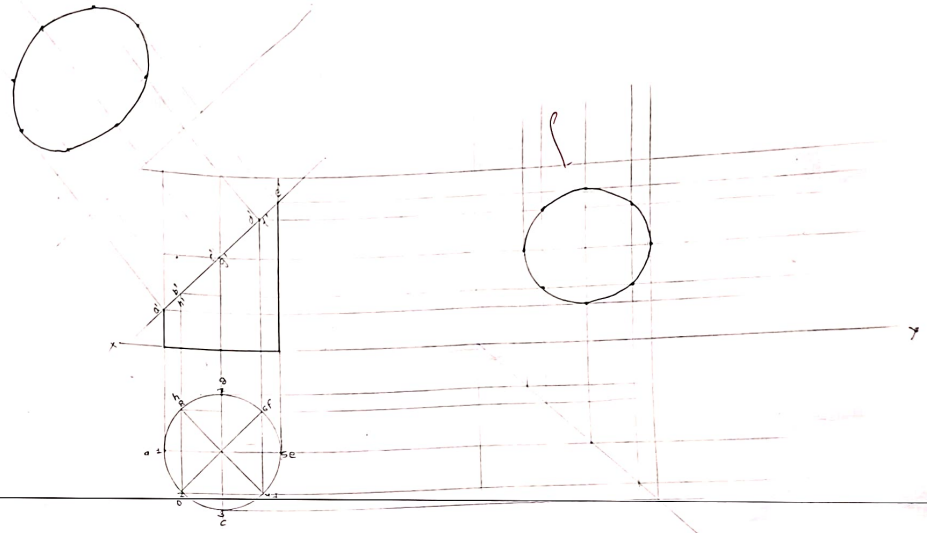

25mm
12mm
32mm
65mm
55mm
23mm
35mm
15mm

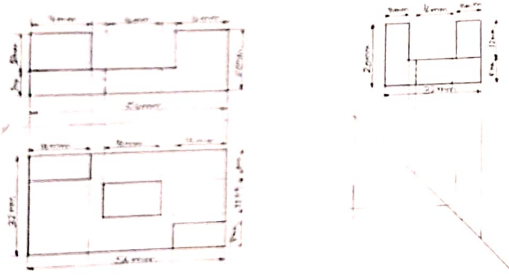

32mm
37mm
12mm
20mm



Practical - Assignment no. 5

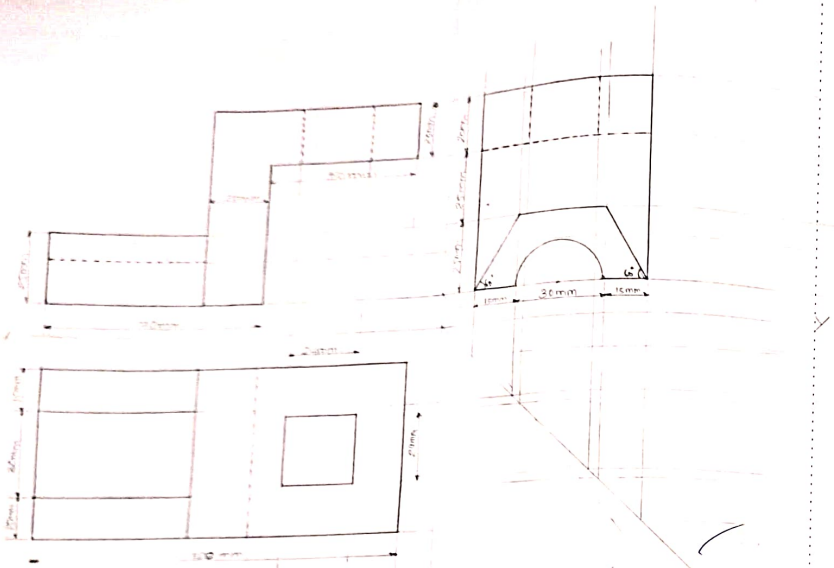
1. A cylinder of 40 mm diameter, 60 mm height and having its axis vertical, it is cut by a Section perpendicular to the VP and inclined at 45° to the HP, it is intersecting the axis 32 mm above the base. draw its front view sectional top view and true shape of section.



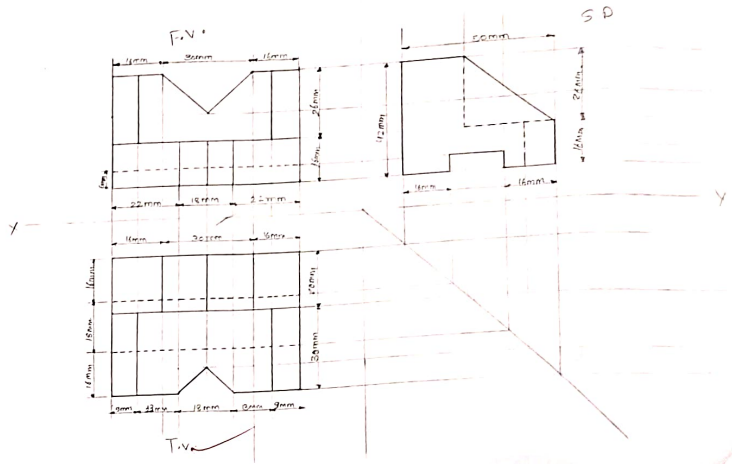


Incomplete drawing

(7)

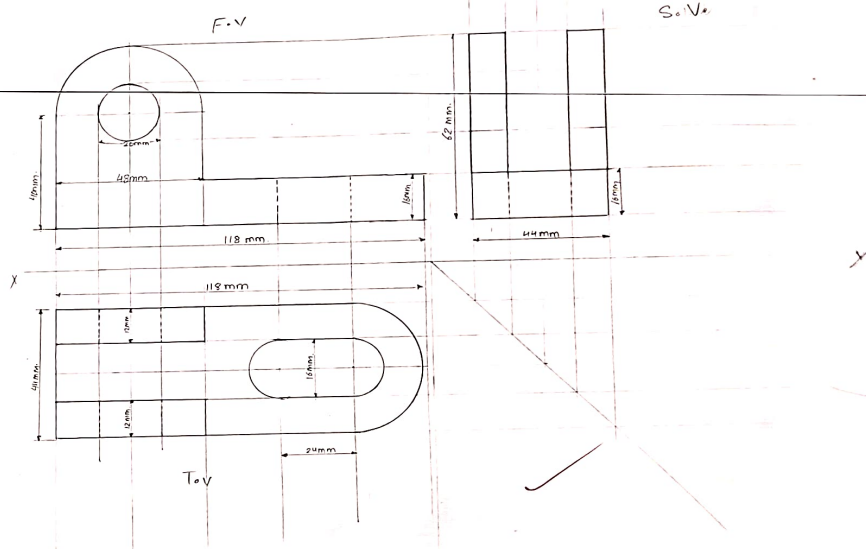


(8)



(9)

(10)



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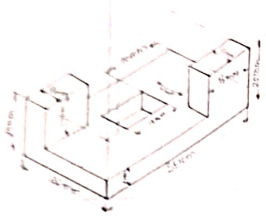
Unit – 05

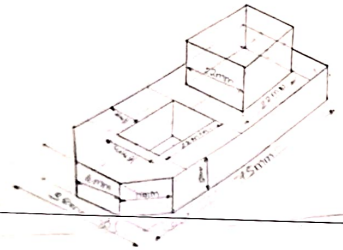
Practical – Assignment – 06

Isometric Projection

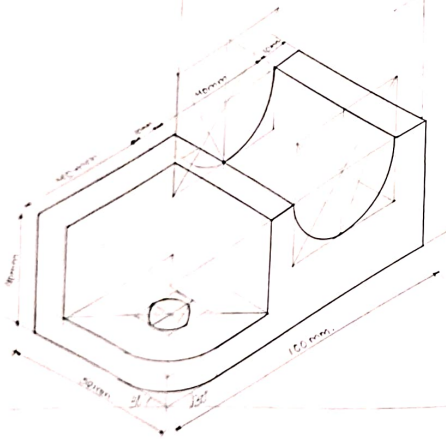
(1) Draw the isometric view.



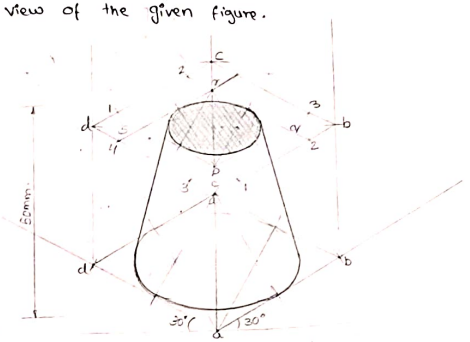
(2) Draw the isometric view of the given figure.



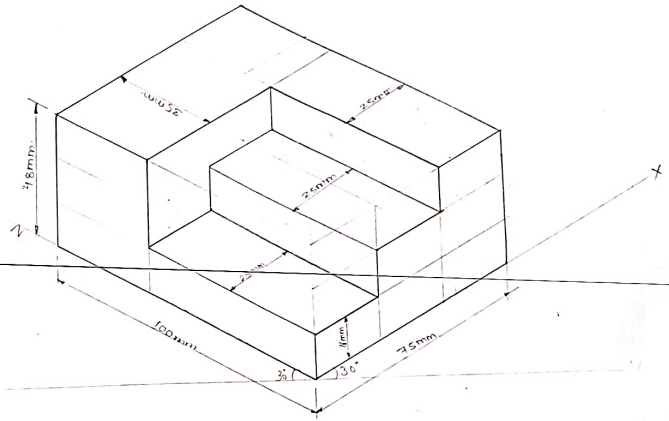
(3) Draw the isometric view of the given figure.



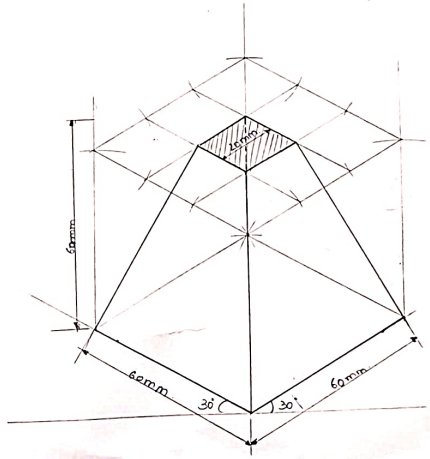
(4) Draw the isometric view of the given figure.



(5) Draw the isometric view of the casting shown is two views:-



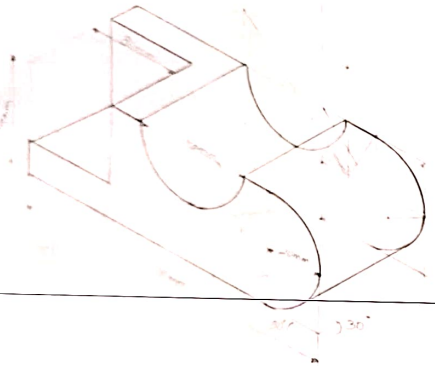
Q.6 Plan and elevation of an object are identical as shown in figure, draw the isometric view.



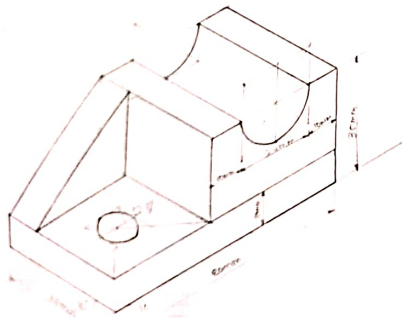
very xp

Q.7. Draw the isometric drawing of the frustum of the a regular pyramid, side of base hexagon is 20 mm and of the top hexagon is 30mm and height of the frustum is 40 mm.

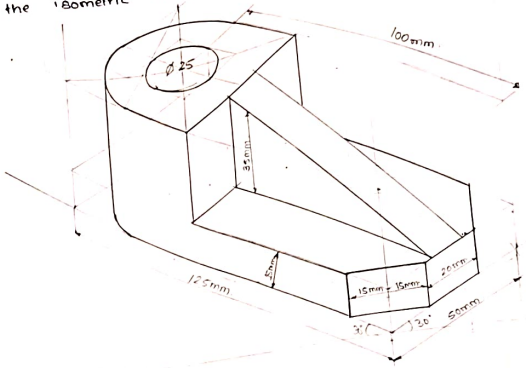
Q.8. Draw the isometric view from given orthographic projection.



Q.9. Draw the isometric view of the object shown in two views in following figure.



Q.10. Draw the isometric view of the object shown



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Semester- 2nd.	Isometric Projection.
SUB. DATE	SHEET NO. 1
GRADE.	CHECKED BY: