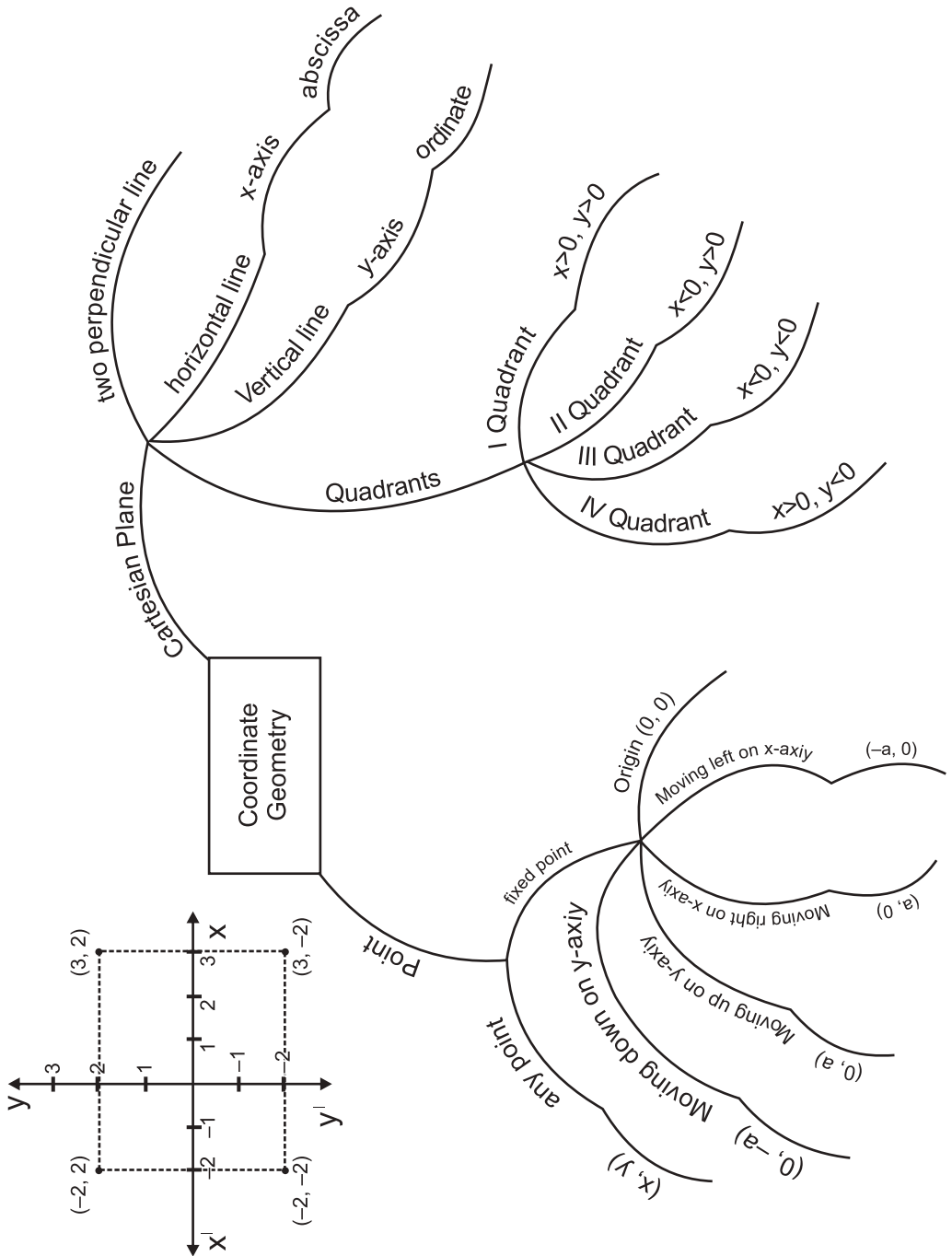


CHAPTER-3 COORDINATE GEOMETRY MIND MAP

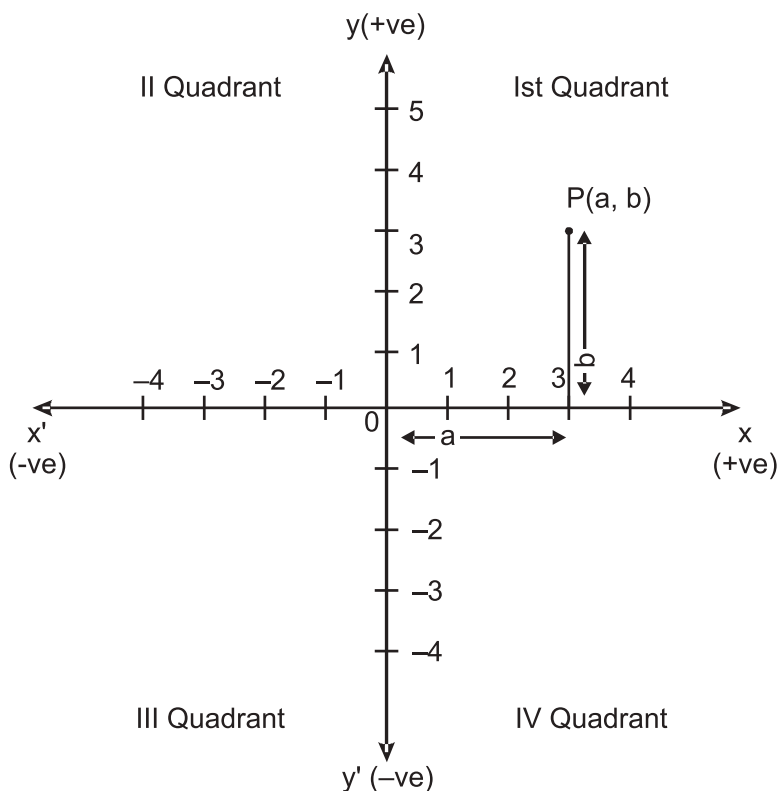


CHAPTER-3

CO-ORDINATE GEOMETRY

KEY POINTS

- **Coordinate Axes** : The position of a point in a plane is determined with reference to two fixed mutually perpendicular lines, called coordinate axes.



The horizontal line xox' is called x-axis.

The vertical line yoy' is called y-axis.

The intersection point of these two lines is called origin. It is represented by O.

- **Coordinates** : Location of a point P in cartesian system, written in the form of ordered pair say $P(a, b)$ as shown in figure above.
a is the length of perpendicular of P (a, b) from y-axis and is called abscissa of P.

- b is the length of perpendicular of $P(a, b)$ from x -axis and is called ordinate of P .
- Location of a point $P(a, b)$ on graph with sign convention – where a and b are such that –

	Value of Point	Sign of Point	Location of Point
i)	$a = 0, b = 0$	–	origin
ii)	$a > 0, b > 0$	(+, +)	Ist Quadrant
iii)	$a < 0, b > 0$	(–, +)	IInd Quadrant
iv)	$a < 0, b < 0$	(–, –)	IIIrd Quadrant
v)	$a > 0, b < 0$	(+, –)	IVth Quadrant

Note: If a point lie on x -axis or y -axis it does not lie in any quadrant.

- Coordinates of a point on x -axis are of the form $(x, 0)$
- Coordinates of a point on y -axis are of the form $(0, y)$