Note: Please attempt any 10 short questions from Question 2. Also, attempt both parts of Question 3. Cutting and removal of any content is strictly prohibited.

Q.No.1 Choose the correct Answer. $(10 \times 1 = 10)$

1. The x-component of a point $p(x,y)$ called:							
a) Ordinate		b) Abscissa		c) Coordinate		d) Distance from origin	
2. The slope of line with inclination 90° is:							
a) 0		b) 1		c) $\frac{1}{\sqrt{3}}$		d) Undefined or ∞	
3. Two lines l_1 and l_2 are with slope m_1 and m_2 are parallel if $m_1 = $ ____.							
a) m_2		b) m_1		c) ∞		d) 0	
4. A linear equation in two variables represent:							
a) Circle		b) Ellipse		c) Straight line		d) Hyperbola	
5. The line $ax + by + c = 0$ is parallel to $x-axis$ if:							
a) $a = 0$		b) $b = 0$		c) $c = 0$		d) $b = c$	
6. Slope of line parallel to $x-axis$ is:							
a) Undefined		b) 0		c) 1		d) -1	
7. Point slope of form of equation of straight line is:							
a) $y = mx + c$		b) $y - y_1 = m(x - x_1)$		c) $\frac{x}{a} + \frac{y}{b} = 1$		d) $x\cos\alpha + y\sin\alpha = p$	
8. The distance of the point(2,3) from $y-axis$ is:							
a) 3		b) 2		c) -3		d) -2	
9. Slope of the line $2y = x - 7$ is:							
a) $\frac{1}{2}$		b) 2		c) $\frac{-1}{2}$		d) -2	
10. The perpendicular distance of the line $3x + 4y + 5 = 0$ from the origin is:							
a) 0		b) 1		c) 2		d) 5	

Q.No.2 Give the Short answer. $2 \times 10 = 20$

i.	Describe the location of the point $|x| = -|y|$?
ii.	The two points P and O' are given in $xy-coordinate$ system. Find the $XY-coordinate$ of $P(-2,6)$; $O'(1,3)$ preferred to the translated axes $O'X$ and $O'Y$.
iii.	Find whether the given point $(5,8)$; $2x - 3y = 6 = 0$.
iv.	Find the distance from point P(6,-1) to the line $6x - 4y + 9 = 0$.
v.	Define Homogenous equation and write its standard form.
vi.	Find the area of triangle with vertices $A(1,4)$, $B(2,-3)$ and $C(3,-10)$.
vii.	Find the line represented by each of $10x^2 - 23xy - 5y^2 = 0$ also find angle between them.
viii.	Find the equation of vertical line through $(-5,3)$.
ix.	Find the equation of line through $(-4,7)$ and parallel to $2x - 7y + 4 = 0$.
x.	Check whether the point $(-7,6)$ lies above or below the given line $4x + 3y - 9 = 0$.

Q.No.3: Write the detailed answer of the following questions. $2 \times 5 = 10$

a)	Find h such that such that point $A(\sqrt{3}, -1)$, $B(0,)$ and $C(h, -2)$ are the vertices of triangle?
b)	Find joint equation of the straight lines through the origin perpendicular to the lines represented by $x^2 + xy - 6y^2$.