

Unit 10

Graphs of Functions

Sr. No.	Questions	A	B	C	D
1	$x = 5$ represents:	x -axis	y -axis	line \parallel to x -axis	line \parallel to y -axis✓
2	Slope of the line $y = 5x + 3$ is:	3	-3	5✓	-5
3	The y -intercepts of $y = -2x - 1$ is:	-2	2	-1✓	1
4	The graph of $y = x^3$, cuts the x -axis at:	$x = 0$ ✓	$x = 1$	$x = -1$	$x = 2$
5	The graph of 3^x represents:	growth✓	decay	both (A) and (B)	a line
6	The graph of $y = -x^2 + 5$ opens:	upward	downward✓	left side	right side
7	The graph of $y = x^2 - 9$ opens:	upward✓	downward	left side	right side
8	$y = 5^x$ is _____ function.	linear	quadratic	cubic	exponential✓
9	Reciprocal function is:	$y = 7^x$	$y = \frac{2}{x}$ ✓	$y = 2x^2$	$y = 5x^3$
10	$y = -3x^3 + 7$ is _____ function.	exponential	cubic✓	linear	reciprocal

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Solution of MCQs

1	The equation $x = 5$ is a vertical line parallel to the y -axis.
2	$y = 5x + 3 \Rightarrow \text{slope} = m = 5$
3	$y = -2x - 1 \Rightarrow y$ -intercept is -1
4	$y = x^3$ cuts the x -axis at $x = 0$. Solve for $y = 0$
5	The function 3^x is an exponential growth function.
6	The coefficient of x^2 is negative -1 , so the parabola opens downward.
7	The coefficient of x^2 is positive 1 , so the parabola opens upward.
8	The function $y = 5^x$ is an exponential function.
9	A reciprocal function has the form $y = \frac{k}{x} \Rightarrow y = \frac{2}{x}$
10	The highest power of x is 3 , so it is a cubic function.