

KENDRIYA VIDYALAYA SITAPUR FIRST SHIFT

PERIODIC TEST-I

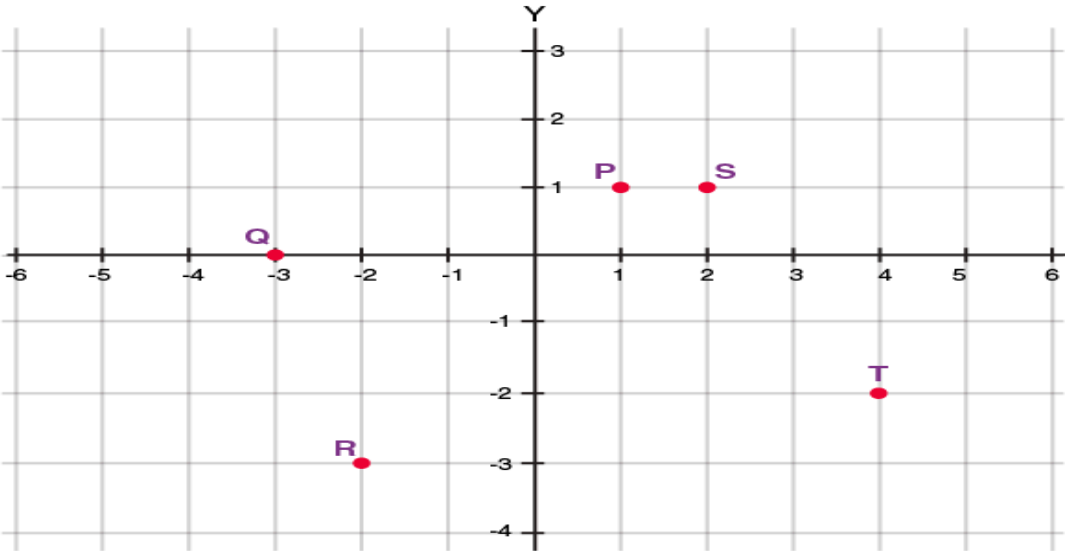
CLASS-IX (MATHS) 2023-23

M.M:-40

TIME:-90 MIN

Note: All questions are compulsory.

S.N O	SECTION-A	MAR K
Q.1	If the decimal representation of a number is non-terminating, non-repeating then the number is (a) a natural number (b) a rational number (c) a whole number (d) an irrational number	1
Q.2	On adding $2\sqrt{3}$ and $3\sqrt{2}$, we get (a) $5\sqrt{5}$ (b) $5(\sqrt{3}+\sqrt{2})$ (c) $2\sqrt{3}+3\sqrt{2}$ (d) none of these	1
Q.3	$(16)^{3/4}$ is equal to (a) 2 (b) 4 (c) 8 (d) 16	1
Q.4	The zero of the polynomial $p(x) = 2x + 5$ is (a) 2 (b) 5 (c) $\frac{2}{5}$ (d) $-\frac{5}{2}$	1
Q.5	The polynomial of type $ax^2 + bx + c$, $a = 0$ is of type (a) linear (b) quadratic (c) cubic (d) Biquadratic	1
Q.6	Which one is not a polynomial (a) $4x^2 + 2x - 1$ (b) $y + \frac{3}{y}$ (c) $x^3 - 1$ (d) $y^2 + 5y + 1$	1
Q.7	Which point lies on x-axis? (a) (3, 2) (b) (-3, 2) (c) (2, 0) (d) (-1, -2)	1
Q.8	Which point lies in IV quadrant? (a) (-3, -4) (b) (2, -4) (c) (-2, 3) (d) (0, 1)	1
Q.9	The graph of which of the following equations passes through the origin? (a) $y = 2x + c$ (b) $y = 2x - c$ (c) $y = 2x$ (d) none of these	1
Q.10	Through which of the following points, the graph of $y = -x$ passes? (a) (1, 1) (b) (0, 1) (c) (-1, 1) (d) none of these	1
Q.11	How many straight lines can be drawn through two given lines? (a) None (b) Only one (c) Two (d) Three	1
Q.12	What is the minimum number of lines required to make a closed figure? (a) One (b) Two (c) Three (d) Four	1

Q.13	See the diagram and answer the following questions	
		
(a)	The co ordinate of point P is (a) (1,1) (b) (-1,0) (c) (1, 2) (d) (3,0)	1
(b)	The co ordinate of point R is (a) (3, -2) (b) (-2 ,-2) (c) (-2,3) (d) (0,4)	1
(c)	The distance between the point P and S is (a) 1 unit (b) 2 unit (c) 3 unit (d) 4 unit	1
(d)	The coordinate of point T is (a) (-2,3) (b) (4,3) (c) (4 , - 2) (d) (4,0)	1
Q.14	Anil went to buy some vegetables, he bought 'x' kgs. of tomato and 'y' kgs. of potato. The total cost of vegetables comes out to be of Rs. 200. Now if the cost of 1 kg of tomato is Rs. 50 and 1 kg of potato is Rs. 20, then answer the following questions.	
(a)	Which of the following equations represent the total cost. (a) $5x - 2y = 20$ (b) $5y + 2x = 20$ (c) $5x + 2y = 20$ (d) $2x + 5y = 20$	1
(b)	If Anil bought 'x' kgs of tomato and 2.5 kgs. of potato, then find the value of 'x'. (a) 5 (b) 2 (c) 3 (d) 4	1
(c)	If Anil bought '2' kgs of tomato and 'y' kgs of potato, then find the value of 'y'. (a) 5 (b) 2 (c) 3 (d) 4	1
(d)	The graph of $5x + 2y = 20$ cuts x-axis at the point. (a) (10, 0) (b) (4, 0) (c) (0, 0) (d) it is parallel to x-axis	1
	SECTION- B	
Q.15	Find six rational numbers between 3 and 4.	1
Q.16	Simplify each of the following expressions (a) $(3+\sqrt{3})(2+\sqrt{2})$ (b) $(3+\sqrt{3})(3-\sqrt{3})$	1
Q.17	Write the degree of each of the following polynomials (a) $5x^3+4x^2+7x$ (b) $4-y^2$	1
Q.18	Find the value of the polynomial $p(x)=5x-4x^2+3$. (i) $x = 0$ (ii) $x = -1$	1
Q.19	In which quadrant or on which axis do each of the points $(-2, 4)$, $(3, -1)$, $(-1, 0)$, $(1, 2)$ and $(-3, -5)$ lie? Verify your answer by locating them on the Cartesian plane.	1

Q.20	Write the answer to each of the following questions. (i) What is the name of the horizontal and vertical lines drawn to determine the position of any point in the Cartesian plane? (ii) What is the name of each part of the plane formed by these two lines?	1
Q.21	The cost of a notebook is twice the cost of a pen. Write a linear equation in two variables to represent this statement. (Take the cost of a notebook to be Rs. x and that of a pen to be Rs. y)	1
Q.22	Express the following linear equations in the form $ax + by + c = 0$ and indicate the values of a , b and c in each case. (i) $x - (y/5) - 10 = 0$ (ii) $-2x + 3y = 6$	1
Q.23	Express the following in the standard form of linear equation in two variable $2x + 5 = 0$ (b) $-2y - 7 = -4x$	2
Q.24	Rationalize the denominators of the following: (i) $1/\sqrt{7}$ (ii) $1/(\sqrt{7} - \sqrt{6})$	5
Q.25	Factorise the following using appropriate identities: $4y^2 - 4y + 1$	5