KENDRIYA VIDYALAYA GACHIBOWLI, HYDERABAD
SAMPLE PAPER 07 : PERIODIC TEST – 1 (2019 – 20)
CLASS – IX
MATHEMATICS

T.T. 1:30 **M.M. 40**

General Instructions:

1. All questions are compulsory.
2. Question paper is divided into four sections: Section A contains 10 Objective type questions each carry 1 mark, Section B contains 3 questions each carry 2 marks, Section C contains 4 questions each carry 3 marks and Section D contains 3 questions each carry 4 marks.

SECTION – A (1 mark each)

1. $3\frac{3}{8}$ in decimal form is:

(a) 3.35 (b) 3.375 (c) 33.75 (d) 337.5

2. A rational number between $\frac{1}{2}$ and $\frac{3}{4}$ is:

(a) $\frac{2}{5}$ (b) $\frac{5}{8}$ (c) $\frac{4}{3}$ (d) $\frac{1}{4}$

3. On dividing $x^3 + 3x^2 + 3x + 1$ by $5 + 2x$ we get remainder:

(a) $\frac{8}{27}$ (b) $\frac{27}{8}$ (c) $-\frac{27}{8}$ (d) $-\frac{8}{27}$

4. Which one of the following is the zero of p(x) = $5x - \pi$:

(a) $-\frac{4}{5}\pi$ (b) $\frac{1}{5}\pi$ (c) $\frac{4}{5}\pi$ (d) none of these

5. The factors of $2x^2 - 7x + 3$ are:

(a) (x – 3)(2x – 1) (b) (x + 3)(2x + 1)
(c) (x – 3)(2x + 1) (d) (x + 3)(2x – 1)

6. Ordinate of the all the points on x – axis is:

(a) 0 (b) 1 (c) –1 (d) any number

7. The point (–5, 2) and (2,–5) lies in:

(a) same quadrant (b) II and III quadrant, respectively
(c) II and IV quadrant, , respectively (d) IV and II quadrant, respectively

8. Graph of y = 6 is a line:

(a) parallel to x – axis at a distance 6 units from the origin
(b) parallel to y – axis at a distance 6 units from the origin
(c) making an intercept 6 on the x –axis.
(d) making an intercept 6 on both the axes.

9. x=5, y=2 is a solution of the linear equation

(a) x + 2y = 7 (b) 5x + 2y = 7 (c) x + y = 7 (d) 5x + y = 7

10. If a linear equation has solutions (–2, 2), (0, 0) and (2, –2), then its is of the form

(a) y – x = 0 (b) x + y = 0 (c) –2x + y = 0 (d) –x + 2y = 0

SECTION – B (2 marks each)

11. Find the solution of the linear equation $x + 2y = 8$ which represents a point on (i) x-axis (ii) y-axis

12. Simplify $\frac{6-4\sqrt{2}}{6+4\sqrt{2}}$ by rationalizing the denominator.

13. Without plotting the points indicate the quadrant in which they will lie, if
(i) ordinate is 5 and abscissa is – 3
(ii) abscissa is – 5 and ordinate is – 3

SECTION – C(3 marks each)

14. Represent the real number $\sqrt{2}, \sqrt{3}, \sqrt{5}$ on a single number line.

15. How would you rewrite Euclid's fifth postulate so that it would be easier to understand? Does Euclid's fifth postulate imply the existence of parallel lines? Explain.

16. If $a + b + c = 9$ and $ab + bc + ca = 26$, find $a^2 + b^2 + c^2$.

17. Express 0.26262626…… in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

SECTION – D (4 marks each)

18. Points A (5, 3), B (– 2, 3) and D (5, – 4) are three vertices of a square ABCD. Plot these points on a graph paper and hence find the coordinates of the vertex C.

19. Solve the equation 2y + 1 = y – 5, and represent the solution(s) on (i) the number line, (ii) the Cartesian plane.

20. Factorise : (i) $8p^3 + \frac{12}{5}p^2 + \frac{6}{25}p + \frac{1}{125}$ (ii) $1 - 64a^3 - 12a + 48a^2$