<u>TEST – 4</u>
<u>Syllabus:</u>

(Ch.# 7,8,9,14,17 – 16 (Theorem #-4,5) Define of these chapter.

MATHEMATICS (SCIENCE)   2020- (9TH CLASS)   PAPER: II (OBJECTIVE TYPE)
TIME ALLOWED: 15 Min   Marks: 15

Note: Four possible answers A, B, C and D to each question are given. The choice which you think is correct fill that circle in front of that question with marker or Pen ink in the answer-book. Cutting or filling two or more circle will result in zero mark in that question.

1.1   The S.S of $|x - 4| = -4$
    (A) -8   (B) -16   (C) Blank or { }   (D) 8

2.   Which of the following is the solution of the inequality? $3 - 4x \leq 11$

    (A) -8   (B) -2   (C) $-\dfrac{14}{4}$ (D) None

3. $x = $ _____ is a member of solution set of inequality $-2 < x < \dfrac{2}{3}$

    (A) -5   (B) 3   (C) 0   (D) $\dfrac{3}{2}$

4.   If x is no larger than 10. Term:
    (A) $x \geq 8$ (B) $x \leq 10$ (C) $x > 10$ (D) $x < 10$

5.   If the capacity of 'C' and elevator is at mot 1600 pounds. Then:
    (A) C<1600   (B) C $\leq$ 1600   (C) C $\geq$ 1600   (D) 1600 C $\geq$

6. $x = 0$ is solution of the inequality…………..
    (A) x > 0   (B) 3x + 5 <0   (C) x + 2 =0   (D) x – 2 < 0

7.   Point (-3,-3) lies in quadrant:
    (A) I   (B) II   (C) III   (D) IV

8.   Which ordered pair satisfies the equation y = 2x:
    (A) (0.1)   (B) (2.2)   (C) (2.1)   (D) (1.2)

9.   Distance between point (0,0) and (1,1) is:
    (A) $\sqrt{2}$ (B) 1   (C) 0   (D) 2

10.   A triangle having all sides equal is called
    (A) Isosceles   (B) Equilateral   (C) A and B   (D) None of these

11.   The symbol used for similarity is_____
    (A) -   (B) =   (C) $\cong$ (D) $\cong$

12.   A triangular_____ is the union of a triangle and its interior.
    (A) Interior   (B) Area   (C) Region   (D) Exterior

13.   If the length and breadth of a rectangle are 'a' and 'b' then the area will be.
    (A) a + b   (B) a – b   (C) a $\div$ B   (D) a x b

14.   The right bisectors of the sides of a triangle are_____.
    (A) Concurrent   (B) Non-concurrent   (C) Collinear   (D) Non-collinear

15.   One angle on the base of an isosceles triangle is 30º. What is the measure of the vertical angle is.
    (A) 30º   (B) 60º   (C) 90º   (D) 120º

	A B C D		A B C D		A B C D		A B C D		A B C D
1	Ⓐ Ⓑ Ⓒ Ⓓ	4	Ⓐ Ⓑ Ⓒ Ⓓ	7	Ⓐ Ⓑ Ⓒ Ⓓ	10	Ⓐ Ⓑ Ⓒ Ⓓ	13	Ⓐ Ⓑ Ⓒ Ⓓ
2	Ⓐ Ⓑ Ⓒ Ⓓ	5	Ⓐ Ⓑ Ⓒ Ⓓ	8	Ⓐ Ⓑ Ⓒ Ⓓ	11	Ⓐ Ⓑ Ⓒ Ⓓ	14	Ⓐ Ⓑ Ⓒ Ⓓ
3	Ⓐ Ⓑ Ⓒ Ⓓ	6	Ⓐ Ⓑ Ⓒ Ⓓ	9	Ⓐ Ⓑ Ⓒ Ⓓ	12	Ⓐ Ⓑ Ⓒ Ⓓ	15	Ⓐ Ⓑ Ⓒ Ⓓ

نوٹ: معروضی سوال نامے کوتوجہ سے پڑھیں اور ہر MCQ کی درست آپشن A,B,C,D کی پین کی سیاہی یا مارکر سے اس طرح پُر کریں کہ سیاہی دائرے سے باہر نہ نکلے ایک سے
زیادہ دائروں کو پُر کرنے یا کاٹ کر پُر کرنے کی صورت میں مذکورہ جواب غلط تصور ہوگا۔

Syllabus:

(Ch# 7,8,9,14,17 – 16 (Theorem #-4,5) Define of these chapter.

MATHEMATICS (SCIENCE)	**2020-(9TH CLASS)**	**Paper: (Essay Type)**
Time Allowed: 2:10 hours		**Maximum. Marks: 60**

(PART – I)

2.   Write short answers to any SIX (6) questions: 12

(i)   Define linear equation.

(ii)   Define Radical equation.

(iii)   Define Absolute value.

(iv)   What is additive closure property of inequality?

(v)   Define Cartesian plane.

(vi)   What are collinear and Non-collinear points in the plane?

(vii)   Define Scalene Triangle.

(viii) Define Ratio and Proportion.

(ix)   Define concurrent lines and give at least three examples.

3.   Write short answers to any SIX (6) questions: 12

(i)   Construct ΔABC in which $m\overline{AB} = 3.2cm$, $m\overline{BC} = 4.2cm$, $m\overline{CA} = 5.2cm$.

(ii)   Construct a right-angled isosceles triangle whose hypotenuse is 5.2cm.

(iii)   Solve $x + \dfrac{1}{3} = 2\left(x - \dfrac{2}{3}\right) - 6x$.

(iv)   Solve and check $\sqrt[3]{2x+3} = \sqrt[3]{x-2}$

(v)   Solve $|3 + 2x| = |6x - 7|$

(vi)   Solve $|x+2| - 3 = 5 - |x+2|$

(vii)   Solve $3 \geq \dfrac{7-x}{2} \geq 1$

(viii) Solve $3(x-1) - (x-2) > 2(x+4)$

(ix)   Find the distance between $A\left(-4, \sqrt{2}\right)$ and $B(-4, -3)$

4.   Write short answers to any SIX (6) questions: 12

(i)   Find the mid-points of $A(9,2)$, $B(7,2)$ and $C(0,0)$, $D(0,-5)$

(ii)   Construct triangle ΔABC in which $m\overline{AB} = 3.6cm$, $m\angle A = 75^0$, $m\angle B = 45^0$.

(iii)   Construct triangle if possible, $m\overline{AB} = 5.2cm$, $m\overline{AC} = 4.2cm$, $m\angle B = 45^0$.

(iv)   Define similar triangles.

(v)   Use distance formula to prove whether or not the points $(1,1), (-2, -8)$ and $(4,10)$ lie on a straight line.

(vi)   Find length of the diameter of the circle having centre at $C(-3, 6)$ and passing through $P(1,3)$

(vii)   Determine the quadrant of the Co-ordinate plane in which the following points lie:
$P(-4,3)$, $Q(-5, -2)$, $R(2,2)$, $S(2,-6)$

(viii) Find K, given that the point $(2,k)$, is equidistant from $(3,7)$ and $(9,1)$

(ix)   Solve and check. $\sqrt{\dfrac{x+1}{x+5}} = 2$

(PART – II)

Note: **Attempt any THREE questions in all . But question No.9 is Compulsory.**

5. (a) Solve $2\frac{2}{3}x + \frac{2}{3}(5x-4) > \frac{-1}{3}(8x+7)$ 4

 (b) If $O(0,0)$, $A(3,0)$ and $B(3,5)$ are three points in the plane, find M_1 and M_2 4
 as midpoints of the line segment AB and OB respectively. Find $|M_1 M_2|$

6. (a) The vertices of a triangle are $P(4,6)$, $Q(-2,-4)$ and $R(-8,2)$. Show that the length   4
 of the line segment joining the midpoints of the line segments PR, QR is $\frac{1}{2} PQ$.

 (b) Construct triangle ΔABC and draw perpendicular bisectors.   4
 $m\overline{BC} = 2.9cm, \ m\angle A = 30^0, \ m\angle B = 60^0$.

7. (a) Prove that the midpoints of hypotenuse of a right triangle is equidistant from its three   4
 vertices $P(-2,-5)$, $Q(1,3)$ and $R(-1,0)$

 (b) Construct a triangle ΔABC equal in area to the quadrilateral ABCD, having   4
 $m\overline{AB} = 6cm$, $m\overline{BC} = 4cm$, $m\overline{AC} = 7.2cm$, $m\angle BAD = 105^0$, and $m\overline{BD} = 8cm$.
 And prove areas are equal.

8. (a) Solve the equation: $x + \frac{1}{3} = 2 = \left(x - \frac{2}{3}\right) - 6x$ 4

 (b) Write the equation x - 2y = -2 in the form of y = mx + c.   4

9. Triangles on equal bases and of equal altitudes are equal in area.   8