STD: 10th 1st Unit Test **Sub – Math 1**

Marks:20 **Time: 1 Hr.**

Q1. Solve the following **(4 Marks)**

1) To draw graph of $4x + 5y = 19$, Find y when x = 1

(A) 4 (B) 3 (C) 2 (D) – 3

2 Obtain the quadratic equation if roots are 3, 5.

(A) $x^2 - 15x + 8 = 0$ (B) $x^2 - 8x + 15 = 0$

(C) $x^2 + 3x + 5 = 0$ (D) $x^2 + 8x - 15 = 0$

3) Find the value of a, b, c for the equation $x^2 + 10x - 7 = 0$?

(A) $a = -1$, $b = 10$, $c = 7$ (B) $a = 1$, $b = -10$, $c = 7$

(C) $a = 1$, $b = 10$, $c = -7$ (D) $a = 1$, $b = 10$, $c = 7$

4) For simultaneous equations in variables x and y $Dx = 49$, $Dy = -63$ and $D = 7$ then Find y.

(A) 9 (B) 7 (C) -7 (D) – 9

Q2. Solve the following **(4 Marks)**

1. To solve $x + y = 3$; $3x - 2y - 4 = 0$ by determinant method find D.
2. $m^3 - 5m + 4 = 0$ Decide given equation is quadratic equations?
3. $99x + 101y = 499$ and $101x + 99y = 501$ the find the value of $x + y$
4. $2m^2 - 5m = 0$ check whether 2 are solution of the equation

Q3. Solve any Three **(6 Marks)**

1. Find the values of each of the following determinants. $\begin{vmatrix} 8 & 4 \\ 1 & -2 \end{vmatrix}$
2. Write the following equation in the form $ax^2 + bx + c = 0$, then write the values of a, b, c for each equation.

   $2x^2 - 5x + 7 = 0$
3. Solve the simultaneous equations: $x + y = 2$ and $2x - y = 2$
4. $x^2 + 8x + 15 = 0$ Solve quadratic equations by factorization

Q4. Solve any Two **(6 Marks)**

1. Solve by Formula method $5x^2 + 13x + 8 = 0$
2. The sum of squares of two consecutive natural numbers is 244; find the numbers.
3. Draw the graph of equation $x + 2y = 4$. Find the area of the triangle form by the line intersecting to X – axis and Y – axis.