Time 2:40 Hrs SECTION – B

Q.2 Attempt any 9 questions of the following:

i. Solve the system of linear equations $2x+3y = -1$, $x-y = 2$ with the help of matrices.

ii. Simplify: $\sqrt{\frac{625x^3y^4}{25xy^2}}$

iii. Simplify: $\frac{2.83}{(6.52)^3}$ with the help of logarithm

iv. Find the value of ab+bc+ca, when $a+b+c = 14$ and $a^2 + b^2 - c^2 = 78$.

v. Factorize $24x^3 + 3$.

vi. Find the square root of $x^2 - 2x + 1 + 2xy - 2y + y^2$.

vii. Find the solution set of $\sqrt{2x-7} + 8 = 11$

viii. Draw the graph of the equation $y - 2x = 6$

ix. Prove that A(–4, –3), B(I, 4) and C(6, I 1) are collinear.

x. The sum of three consecutive odd integers is 81. Find the numbers.

xi. A line parallel to one side of a triangle, intersecting the other two sides divides then proportionally.

xii. A ladder whose foot is 2.5m from the front of a house reaches a window 6m above the ground. Calculate the length of a ladder.

SECTION – C Marks: 24

Note: ***Attempt any THREE questions:***

Q.3: Prove that points A(–2, –2), B(4, –2), C(4, 6) are the vertices of a right angled triangle.

Q.4: If two angles of a triangle are congruent, then the side opposite to these angles are congruent?

Q.5: Any point on the right bisectors of a line segment is equidistant from end points of the segment.

Q.6: Construct Δxyz when $m\overline{yz} = 4.1cm$, $m\angle y=60^0$ and $m\angle x=75^0$.