Date : 31-1-2024	SUT – 2024	Time : 1 hour	A
Std : IX	Sub : MATHS - I	Marks: 20	

Q.1) Solve any four subquestions of the following: **(4)**

1) Convert the ratio 5:8 into percentage.
2) If $3x - 4y = 5$ and $4x - 3y = 2$ then find the value of $x + y$.
3) If $7:2 = y : 14$ then what will be the value of y?
4) 'The difference between the ages of Alka and Dilip is 5' form the equation by using variable x and y.
5) What is the ratio of 1mm to 1cm?
6) $x - y = 8$ and $2x + y = 19$ then find the value of $3x$.

Q.2) Solve any three subquestions of the following: **(6)**

1) The price of 4 simcards and 5 earphones is ₹ 1050 and price of 4 earphones and 5 simcards is ₹ 1200 then find the total value of a simcard and earphone altogether.
2) Solve the following equations by equating coefficients of variables:
   $x - 2y = -10$, $3x - 5y = -12$
3) Find the value of 'x' if $\frac{x}{2} + \frac{y}{3} = 6$ and $\frac{x}{2} - \frac{y}{7} = 1$
4) If $\frac{a}{b} = \frac{7}{3}$ then find the ratio $\frac{a^3 - b^3}{b^3}$
5) Compare the following pair of ratio: $\frac{\sqrt{5}}{3}$; $\frac{3}{\sqrt{7}}$
6) Write the ratio of the first quantity to second quantity in the reduced form.
   5 litre, 2500mℓ.

Q.3) Solve any two subquestions of the following: **(6)**

1) If $\frac{5x+3y}{7x-2y} = \frac{21}{17}$ then find the value of the ratio $\frac{x}{y}$.

2) Sum of today's ages of Pradnya and Dipesh is 58. Dipesh is 2 years elder than Pradnya. Find today's age of Pradnya.

3) Solve the following simultaneous equations by subtitution method:

$x + y = 4$; $2x - 5y = 1$

Q.4) Solve any one subquestion of the following: **(4)**

1) In an envelope there are some 5 rupee notes and some10 rupee notes. Total amount of these notes together is 350 rupees. Number of ₹ 5 notes are less by 10 than number of ₹ 10 notes. Then find the number of ₹ 5 and ₹10 notes.

2) Write the equations in the box according to given instructions.