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:

$$x - 2y = -10 , \quad 3x - 5y = -12$$

3) Find the value of 'x' if $\dfrac{x}{2} + \dfrac{y}{3} = 6$ and $\dfrac{x}{2} - \dfrac{y}{7} = 1$

4) If $\dfrac{a}{b} = \dfrac{7}{3}$ then find the ratio $\dfrac{a^3 - b^3}{b^3}$

5) Compare the following pair of ratio: $\dfrac{\sqrt{5}}{3}$; $\dfrac{3}{\sqrt{7}}$

6) Write the ratio of the first quantity to second in the reduced form.

5 litre, 2500mℓ.

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

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

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:

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

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.