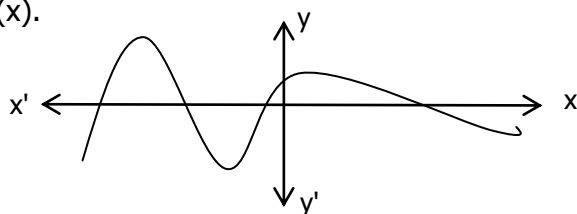


Section - A (1 x 4 = 4 marks)

- Write a quadratic polynomial whose zeroes are 3 and -5.
- Express 3825 as the product of its prime factors.
- 5 pencils and 7 pens together cost Rs 50, whereas 7 pencils and 10 pens together cost Rs 90. Using the above information, form a pair of linear equations in 2 variables.
- The graph of $y=p(x)$ is given below for some polynomial $p(x)$. Find the number of zeroes of $p(x)$.



Section - B (2 x 3 = 6 marks)

- The H.C.F. of two numbers is 54 and their L.C.M. is 3024. If one number is 336, find the other number.
- Find the zeroes of the polynomial $x^2 - 3$ and verify the relationship between the zeroes and the coefficients.
- For what value of k will the following pair of equations $x + 2y = 3$; $5x + ky = -7$ has unique solution.

Section - C (3 x 2 = 6 marks)

- Using Euclid's division lemma, prove that the square of any positive integer is either of the form $3m$ or $3m+1$ for some integer m .
- Rohan can row downstream 20km in 2hours and upstream 4km in 2hours. Find his speed of rowing in still water and speed of the current.

Section - D (4 x 1 = 4 marks)

- Obtain all the zeroes of the polynomial $f(x) = x^4 - 3x^3 - x^2 + 9x - 6$ if two of its zeroes are $-\sqrt{3}$ and $\sqrt{3}$.

Marking Scheme:

1.
 - a. The poet was sitting in a grove. He could hear the musical sound of Nature. He was quietly savouring in the sights and sounds of Nature.
 - b. The poet started thinking about how has man destroyed Nature and thus harmed man himself. Such thoughts filled the poet's heart with sadness.
 - c. The poet's faith is that Nature is not lifeless. There is a soul in it which is linked to man's soul.
 - d.
 - i. Motion
 - ii. twigs

3.
 - a. can..... could
 - b. at.....in
 - c. but.....and
 - d. an.....a

4.
 - i. The morning of my last day in London dawned and I was to leave that night.
 - ii. As I was breakfasting with the family there was a knock at the door.

5.
 - a. the cruel action the mirror commits is reflecting the face of the woman truthfully. It is cruel because she has lost her beauty and charm and it is repulsive to watch it.
 - b. The figure of speech used in the second line is metaphor
 - c. By saying it is four cornered the mirror means that it is as objective as gods. It observes things from different angles and it is never biased.

6.
 - c. Yes, the nightingale was truly brainless as she trusted and obeyed a false master. She should have realized that the frog was not trainer in music and it was his real intention to do away with her.

