

### Choose the correct option.



## Objective Type Questions:

6. A symbol or letter which can be given various numerical values is called a\_\_\_\_\_.
  7. The length of a diameter of a circle in terms of its radius  $r$  units is\_\_\_\_\_.
  8. Expressions formed by using mathematical operations on variables and numbers are called\_\_\_\_\_.
  9. If  $x$  is variable then  $5x$  is also variable. (True / False)
  10. The value of an algebraic expression changes with the change in the value of the variable. (True / False)

## Short/ Long Questions

- Profit earned by a shopkeeper on selling one bottle of soft drink is Rs. 4 more than the cost price. Write an expression for the selling price.
  - The price of 1 pen is Rs. 12 and the price of 1 pencil is Rs. 5. Write an expression for the total amount payable for buying  $x$  pens and  $y$  pencils.
  - If the length and breadth of the rectangle are  $3x$  and  $2y$  respectively, then find its perimeter.
  - Radha is drawing a dot Rangoli (a beautiful pattern of lines joining dots) with chalk powder. She has 10 dots in a row. How many dots will her Rangoli have for  $r$  rows?
  - Deepak's present age is one – third his mother's present age. If the mother's age was five times his age 6 years ago, what are their present ages?

## Case Study Question

Sarah buys books from a dealer for her bookstall. She buys 20 comic books, 15 story books and 10 colouring books. A comic book costs Rs.  $p$ , a story book costs Rs. 5 more than a comic book and a colouring book costs Rs. 10 more than a story book.

- a) Write the expression for the cost of comic books.
  - b) If Sarah gets a profit of Rs. 2 on the sale of each comic book, write the expression that shows the amount Sarah earns by selling 10 comic books.
  - c) Write an expression to show the total cost of 10 storybooks.
  - d) If a colouring book costs Rs 50, what is the cost of the comic book?

## 17. **Source Based Question**

Ramesh is Rahul's father. Age of Ramesh is 3 times the age of Rahul. If Rahul's age is  $y$  years, answer the following questions:

- a) Find the age of Ramesh.      b) Find the age of Rahul 5 years ago.  
c) Find the age of Ramesh after 10 years.      d) Find the age of Ramesh 2 years ago.