## MATHEMATICS

## General Instructions:

Do the calculations in the working column
Give necessary formulae and steps wherever required
This question paper consists of $\mathbf{1 1}$ questions divided into four sections $\mathbf{A}, \mathbf{B}, \mathbf{C}$ and $\mathbf{D}$
Section A comprises of $\mathbf{3}$ questions of $\mathbf{1}$ mark each
Section B comprises of $\mathbf{4}$ questions of $\mathbf{2}$ mark each
Section C comprises of $\mathbf{2}$ questions of $\mathbf{3}$ mark each
Section D comprises of $\mathbf{2}$ questions of $\mathbf{4}$ mark each

## SECTION A

1. Which of the following ratios is equal to $35 \%$ ?
A. 5:7
B. $7: 10$
C. $7: 20$
D. $7: 5$
2. Which of the following polynomial is a trinomial ?
A. 7 abc
B. $2 x^{2}+3 y^{2}-z^{2}$
C. $2 x^{2}+y^{2}$
D. $3 p^{3}$
3. If Cost Price $=$ Rs. 100 and Profit $=$ Rs. 91 , then the gain percent is $\qquad$
A. $100 \%$
B. $9 \%$
C. $91 \%$
D. $12 \%$

## SECTION B

4. A shop gives $30 \%$ discount. What will be the sale price of a pair of sandals marked at Rs 1500 ?
5. The cost of a carpet is Rs 7560 including $8 \%$ VAT. Find its cost before VAT was added.
6. Add the following : $5 x^{2}-4 x y+8 y^{2}, 3 x y+4 x^{2}+3 y^{2},-3 x^{2}+6 x y-7 y^{2}$
7. Subtract $3 x^{2}+4 x^{2} y-5 x y^{2}-y^{2}$ from $-5 y^{2}+7 x^{2}+4 x^{2} y-7 x y^{2}$

## SECTION C

8. Find the amount and compound interest on Rs 50000 for $2 \frac{1}{2}$ years at $10 \%$ per annum compounded annually.
9. The population of a town is 16000 . It is increasing at the rate of $10 \%$ per annum. Find its population after two years.

## SECTION D

10. Find the amount paid when a sum of Rs 20,000 is invested for 1 year at $10 \%$ per annum compounded half yearly.
11. A man bought two horses for Rs 30,000 each. He sold them and on one he made a profit of $3 \%$ and on the other a loss of 5\% Find the overall profit or loss.
