



Date: 02.07.2026
No. of pages: 2

Duration: 1 Hour 15 minutes
M. Marks: 35

GENERAL INSTRUCTIONS

1. All questions are compulsory
2. This question paper has 4 sections, A, B, C and D.
3. Section A has **5 MCQs** and **1 assertion and reasoning** carrying **1 mark** each.
4. Section B has **4 questions** of **2 marks** and **4 questions** of **3 marks**.
5. Section C has **1 case study-based** question of **4 marks**.
6. Section D has **1 long answer type** question of **5 marks**.

SECTION - A

1. Which of the following is an irrational number?

(1 mark)

- a) $\sqrt{400}$ b) $\sqrt{\frac{49}{7}}$ c) $\frac{\sqrt{12}}{\sqrt{3}}$ d) $\sqrt{121}$

2. The degree of polynomial $p(x) = 7x + x^2 + 1^5$ is

(1 mark)

- a) 5 b) 2 c) 1 d) 3

3. In the equation $y = ax + b$ 'a' represents the

(1 mark)

- a) x intercept b) y intercept c) slope d) origin

4. Which of the following is equal to x^3 ?

(1 mark)

- a) $x^6 - x^3$ b) $x^6 \cdot x^{\frac{1}{3}}$ c) $x^6 \div x^2$ d) $x^6 \div x^3$

5. The number obtained on rationalising the denominator of $\frac{1}{\sqrt{3}-2}$ is

(1 mark)

- a) $\frac{\sqrt{3}+2}{-2}$ b) $\frac{\sqrt{3}-2}{1}$ c) $\frac{\sqrt{3}+2}{7}$ d) $\frac{-2-\sqrt{3}}{1}$

6. **DIRECTION:** In the following question, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option. (1 mark)

Assertion: Linear growth shows a positive slope.

Reason: For linear growth patterns $y = ax$, a is positive.

- a) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of Assertion (A)
- b) Both Assertion (A) and Reason (R) are true and Reason (R) is not the correct explanation of Assertion (A)
- c) Assertion (A) is true but Reason (R) is false.
- d) Assertion (A) is false but Reason (R) is true.

SECTION-B

7. Arjun has 4 times as many ten-rupee notes as he has twenty-rupee notes. If the total value of his money is ₹300, how many coins of each denomination does he have? (2 marks)
8. An autorickshaw fare starts at ₹25 and remains the same for the initial 2 km. Then, it increases by ₹15 per km. What will be the fare travel for a travel of 10 km. (2 marks)
9. Simplify $4\sqrt{6} + 2\sqrt{6} + 2\sqrt{3} + \sqrt{24} + \sqrt{45} + 2\sqrt{5}$. (2 marks)
10. Express $1.\overline{16}$ in $\frac{p}{q}$ form where p and q are integers and $q \neq 0$. (2 marks)
11. Find $p(1) + p(-1) + p(-2)$ if $p(x) = x^2 - 3x + 2$. (3 marks)
12. Draw the graph for $y = 3x - 1$ and reflect on the role of a and b . (3 marks)
13. Expand $(2 + \sqrt{5})^2 + (3 - \sqrt{3})^2$. (3 marks)
14. Simplify $\left(\frac{81}{16}\right)^{-\frac{3}{4}} \left[\left(\frac{25}{9}\right)^{-\frac{3}{2}} \div \left(\frac{5}{2}\right)^{-3}\right]$. (3 marks)

SECTION - C

CASE STUDY BASED QUESTION

15. A telecom company charges ₹990 for a certain recharge scheme. This prepaid balance is reduced by ₹15 each day after the recharge.
- (i) Write an equation that models the remaining balance $b(x)$ after using the scheme for x days. (1 mark)
 - Explain why it represents linear decay. (1 mark)
 - (ii) After how many days will the balance run out? (2 marks)
 - (iii) Make a table of values for x varying from 1 to 5 days

SECTION - D

16. Find the value of a and b $\frac{(7+3\sqrt{5})}{3+\sqrt{5}} - \frac{(7-3\sqrt{5})}{3-\sqrt{5}} = a + b\sqrt{5}$ (5 marks)