

Model Test Paper-I

(Based on Chapters 1 to 9)

Instructions :

1. All questions are compulsory.
2. The question paper consists of 30 questions, divided into three sections — A, B and C. Section A consists of 10 questions of 2 marks each, section B of 10 questions of 3 marks each and section C of 10 questions of 5 marks each.

SECTION - A

1. Find the value of 'n' if $n + 7 = 17$.
2. Write additive inverse of -15 .
3. Solve $5^{x-2} = 25$.
4. Find the rational number with which $(-6)^{-1}$ should be multiplied so that the product is 9^{-1} .
5. Express 71865000000 in the form of $K \times 10^n$ where $n=6$.
6. Find the greatest number of two digits which is a perfect square.
7. Find the cube root of 389017.
8. Factorise : $14a - 21$.
9. Solve the equation : $3(x + 1) = 12 + 4(x - 1)$
10. Replace question mark with appropriate number in $5^2 + 6^2 + ? = 31^2$

SECTION - B

1. Represent $\frac{7}{2}$ and $-\frac{7}{2}$ on the number line.
2. By what number should we multiply $\frac{-45}{56}$ to get $\frac{-3}{7}$?
3. Find the square root of 8281.
4. Find cube root of 216×125 .
5. Solve : $\frac{4x + 18}{2x} = 5$
6. Write $(x^3 - 1)(x^2 + 1)$ in the standard form.
7. Factorise : $\frac{2.5 \times 2.5 - 0.5 \times 0.5}{2.5 + 0.5}$
8. Find two rational numbers whose absolute value is $\frac{1}{5}$.
9. What rational number should be added to -1 to get $\frac{-1}{6}$?
10. Write 3.8×10^{11} in the usual form.



SECTION - C

1. Find the product of $(2xy^2 - 5xy^2)$ and $(x^2 - y^2)$.
2. Divide the sum of $\frac{-12}{7}$ and $\frac{13}{5}$ by the product of $\frac{1}{-2}$ and $\frac{-31}{7}$.
3. Find 10 rational numbers between $\frac{-5}{13}$ and $\frac{6}{13}$.
4. Determine x and y so that $3^{x+y} = 81$ and $81^{x-4} = 3$
5. Find the cost of creating a fence around a square field of area 9 hectares at a cost of ₹ 25 per metre.
6. What is the least number by which 120393 should be divided so that the quotient has cube root?
7. A rope was $6a^2 - 5b + 9c$ metres long. A piece of $-7a^2 + 6b - 10c$ has been cut out of it. Find the length of remaining rope.
8. Factorise : $x^2y^2 - 6xyz + 9z^2$
9. Simplify $(m + 1)(m^3 - 3m^2 + 4m - 5) - (3m - 2)(m^3 - m^2 + 5m - 7)$
10. Two numbers are in the ratio 7 : 8 and their sum is 45. Find the numbers.