

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Periodic Test - I (2023 – 2024)

Class: IX
 Subject: Mathematics
 Name: _____

Class / Section: _____

MM: 20
 Time: 1Hrs.
 Roll No.: _____

General Instructions:

1. All questions are compulsory.
2. The question paper consists of 13 questions divided in three sections A, B and C.
3. Section A contains 8 questions of 1 mark each. Section B contains 3 questions of 2 marks each. Section C contains 2 questions of 3 marks each.
4. There is no overall choice. However an internal choice has been provided. You have to attempt only one of the alternatives in all questions.
5. Use of calculator is not permitted.

Section A

Choose the correct answer:

Q1. Find the product of $2\sqrt{3}$ and $3\sqrt{27}$.

- a) $6\sqrt{27}$ b) 54 c) 81 d) none of these

OR

Addition of $2\sqrt{2} + 5\sqrt{3}$ and $\sqrt{2} - 3\sqrt{3}$ is

- a) 4 b) $2\sqrt{2} + 3\sqrt{3}$ c) $10\sqrt{6}$ d) $3\sqrt{2} + 2\sqrt{3}$

Q2. Find the value of $p(-2)$. If $p(x) = x^3 - 3x + 2$.

- a) -8 b) 0 c) 4 d) -12

Q3. Find the value of $(64)^{\frac{2}{3}}$

- a) 64 b) 8 c) 16 d) 4

OR

Find zero of $p(x) = 3x + 4$.

- a) -4 b) $-3/4$ c) $-1/3$ d) none of these

Q4. Which one is not a polynomial?

- a) $y^2 - 2y + \sqrt{3}$ b) $t\sqrt{t} + 45t - t^3$ c) $1 - z$ d) none of these

Q5. Every rational number is a

- a) Real number b) natural number c) whole number d) Integers

- Q6.** Which of the following is an irrational number?
 a) 0.19223 b) $\sqrt{169}$ c) 2.225225 d) $\sqrt{17}$
- Q7.** Find the degree of the polynomial $5z - 2z^3 + 3 - 6z^2$
 a) 1 b) 2 c) 3 d) none of these
- Q8.** One of the factors of $3x^2 + 8x + 5$ is
 a) $(x+3)$ b) $(x+5)$ c) $(x + 1)$ d) none of these

Section B

Answer the following questions:

- Q9.** Find five rational numbers between $\frac{3}{5}$ and $\frac{4}{5}$.
- Q10.** Use the factor theorem to determine whether $g(x) = x + 2$ is a factor of $p(x) = x^3 + 3x^2 + 3x + 1$.

OR

Find the value of k, if $(x-1)$ is a factor of $2x^2 + kx + \sqrt{2}$.

- Q11.** Factorise: $x^2 - \frac{y^2}{100}$

Section C

- Q12.** Express $0.4\bar{7}$ in the form of p/q .

OR

Find the value of a and b, if $\frac{5}{\sqrt{7}-\sqrt{2}} = a\sqrt{7} - b\sqrt{2}$

- Q13.** Factorise: $x^3 + 13x^2 + 32x + 20$
