O. P. JINDAL SCHOOL, SAVITRI NAGAR

Periodic Test –I (Round –I)(2026 – 2027)

Class: X MM: 20

Subject: Mathematics Time: 1Hrs.

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. $\sqrt{0.4}$ is a/an

a) natural number b) integer c) rational number d) irrational number

Q2. Which of the following cannot be the unit digit of 8^n, where n is a natural number?

a) 4 b) 2 c) 0 d) 6

Q3. The product of a non-zero rational number and an irrational number is

a) always irrational b) always rational c) always one d) rational or irrational

Q4. LCM (850, 500) is:

a) 850×50 b) 17×500 c) $17 \times 5^2 \times 2^2$ d) $17 \times 5^3 \times 2$

Q5. The zeroes of $x^2 - 2x - 8$ are:

a) (2, -4) b) (4, -2) c) (-2, 2) d) (-4, 4)

Q6. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then the value of k is:

a) 10 b) -10 c) 5 d) -5

Q7. A quadratic polynomial whose one zero is 6 and sum of the zeroes is 0, is

a) $x^2 - 6x + 2$ b) $x^2 - 36$ c) $x^2 - 6$ d) $x^2 - 3$

Q8. If a graph of a polynomial does not intersects the x- axis but intersects y-axis in one point, then number of zeroes of the polynomial is equal to

a) 0 b) 1 c) 0 or 1 d) none

Section B

Q9. Given that HCF (306, 657) = 9, find LCM (306, 657).

Q10. Find a quadratic polynomial, the sum and product of whose zeroes are -3 and -2, respectively.

OR

If zeroes of the polynomial $x^2 + 4x + 2a$ are α and $2/\alpha$, then find the value of a.

Q11. Find HCF and LCM of 480 and 270 using the prime factorization method

Section C

Q12. Prove that $\sqrt{3}$ is irrational.

OR

Check whether 6^n can end with digit 0 for any natural number n.

Q13. If a and b are zeroes of the polynomial $6x^2 - 5x + 1$, then form a quadratic polynomial whose zeroes are a^2 and b^2.

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