



Bhartiyam International School

Periodic Assessment – 1 (2022-23)

Subject: Mathematics

Class: IX

Date: 12/07/2022

Max. Marks: 20

Name: _____

Roll No: _____

Duration: 90 mins

Instructions:

This question paper consists of four sections.

Section A consists of 10 marks

Section B consists of 8 marks

Section C consists of 12 marks.

Section D consists of 10 marks.

There is no internal choice. All questions are compulsory.

SECTION – A

- Which of the following is an irrational number – 1
(a) $\sqrt{4}$ (b) 5 (c) π (d) None of these
- Which of the following is not a polynomial – 1
(a) $\sqrt{5}x^2 + 4$ (b) $4x^4$ (c) $\sqrt{x} - 4$ (d) None of these
- Which of the following is a zero of the polynomial $p(y) = y^3 - 4y^2 - 5y + 9$? 1
(a) $y=4$ (b) $y= -1$ (c) $y = 0$ (d) None of these
- The value of $36^{\frac{1}{2}} \times 216^{\frac{1}{3}}$ is - 1
(a) 63 (b) 16 (c) 36 (d) None of these
- There are _____ rational numbers between two rational numbers? 1
(a) Infinite (b) Finite (c) 100 (d) None of these
- Which of the following statement is true – 1
(a) Every natural number is an integer (c) Every real number is whole number
(b) Both (a) and (b) (d) None of these

7. $\sqrt[3]{43}$ is expressed in the form of $\frac{p}{q}$ as – 1
- (a) $\frac{99}{2320}$ (b) $\frac{2300}{99}$ (c) $\frac{2320}{99}$ (d) None of these
8. $(a^3 - b^3) =$ _____ 1
- (a) $(a-b)(a^2-ab+b^2)$ (c) $(a-b)(a^2+ab+b^2)$
 (b) $(a-b)(a^2+ab-b^2)$ (d) None of these
9. The value of $p(0)$, if $p(m) = m^3 - 4m + 2$ is – 1
- (a) 2 (b) 0 (c) 5 (d) none of these
10. The polynomial $p(m) = m^2 - 4m + 2$ is- 1
- (a) Quadratic polynomial (c) Cubic Polynomial
 (c) Biquadratic polynomial (d) None of these

SECTION – B

11. Find four rational numbers between $\frac{4}{5}$ and $\frac{5}{6}$ 2
12. Factorize: $2x^2 + 3x - 90$. 2
13. Rationalize the denominator of $\frac{5+\sqrt{6}}{5-\sqrt{6}}$ 2
14. Using suitable identity find the value of $(103)^3$. 2

SECTION – C

15. Factorize : $4x^2 + 9y^2 + 16z^2 + 12xy - 24yz - 16xz$ 3
16. Represent $\sqrt{2}$ on number line. 3
17. Using algebraic identities, find the value of $\frac{0.87 \times 0.87 \times 0.87 + 0.13 \times 0.13 \times 0.13}{0.87 \times 0.87 - 0.87 \times 0.13 + 0.13 \times 0.13}$ 3
18. Find the value of x , if $5^{x-3} \times 3^{2x-8} = 225$ 3

SECTION – D

19. Find the value of a and b , if $\frac{5+2\sqrt{3}}{7+4\sqrt{3}} = a - b\sqrt{3}$ 5
20. Find the values of a and b so that the polynomial $(x^3 - 10x^2 + ax + b)$ is exactly divisible by $(x - 1)$ as well as $(x - 2)$. 5