ATOMIC ENERGY CENTRAL SCHOOL – 3, ANUSHAKTINAGAR MUMBAI

Periodic Test -1 (2024-25)

Class : IX **Mathematics**  MM: 40 Time: 1 ½ H

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Questions **1 to 4** have **1** mark each

Questions **5 to 8** have **2** marks each,

Questions **9 to 12** have **3** marks each, and Questions **13 to 16** have **4** marks each.

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| 1 | Find the value of √12x√27 |
| 2 | Find 82/3 + 272/3 |
| 3 | What is the degree of a non zero constant polynomial? |
| 4. | Find the zero of the polynomial 3x – 12. |
| 5 | Express 0.5656565656… in the form of p/q where p and q are integers, q≠0. |
| 6 | Is the product of two irrational numbers always irrational? Justify your answer by an example. |
| 7. | Classify the following as linear, quadratic and cubic polynomials   1. 3x2 b) 1-2x c) 5x3 – 3x2 d) 1+ 2x-3x2 |
| 8 | Write in expanded form:- (2x-y +z)2 |
| 9 | Factorise:- a) x3 + 6x2 +9x b) x2 – x - 6 |
| 10 | Represent √7.5 on the number line. |
| 11 | Rationalise the denominator:- √5/ ( 3-√5) |
| 12 | Find a if x+a is a factor of the polynomial p(x) = x3 + ax2 -2x + a+ 4 |
| 13 | Evaluate using identities:- a) 105x106 b) 993 |
| 14 | If √2 =1.414 and √3= 1.732 then find the value of 5/(2√2 -√3) + 1/(√3-√2) |
| 15 | Simplify ( x+2y)3 + (x-2y)3 |
| 16 | 1. If x+y+z=0, show that x3 + y3 + z3 = 3xyz. 2. Factorize (x-y)3 + (y-z)3 +(z-x)3 |