ARASWATI DEVI INTERNATIONAL SCHOOL, BANKURA

WEEKLY TEST-1 ACADEMIC SESSION : 2020-21

TIME – 1 hr. CLASS : X SUBJECT : MATHS F.M.-20

A. Choose the correct option : 1x5=5

1. $1.23\overline{48}$ is

(a) an integer. (b) an irrational number

(c) a rational number (d) None of these.

2. HCF of two numbers is 113, their LCM is 56952. If one number is 904, then other number is:

(a) 7719 (b) 7119

(c) 7791 (d) 7911

3. If the HCF of 65 and 117 is expressible in the form 65m – 117, then the value of 'm' is

(a)2. (b)3

(c)4 (d)1

4. If 's' and 't' are the zeroes of a quadratic polynomial x^2-5x+b and s-t=1, then the value of 'b' is

(a)-6. (b)-5

(c)5 (d)6

5. A polynomial of degree ____ is called a linear polynomial.

(a)1 (b)3

(c)2 (d)0

B. Very short answer type question : 1x5=5

6. A shopkeeper has 120 litres of petrol, 180 litres of diesel and 240 litres of kerosene. He wants to sell oil by filling the three kinds of oils in tins of equal capacity. What should be the greatest capacity of such a tin?

7. Write the denominator of the rational number 257/500 in the form $2^m x5^n$, where m and n are non-negative integers. Hence write its decimal expansion without actual division.

8. If $9^{x+2} = 240 + 9^x$, then find the value of x.

9. Which of the following is polynomial?

(a) $x^3 - 6\sqrt{x} + 2$

(b) $\sqrt{x} + \frac{1}{\sqrt{x}}$

(c) $\frac{5}{x^2 - 3x + 1}$

(d) none of these

10. The sum and product of the zeros of a quadratic polynomial are 2 and -15 respectively.

Find the quadratic polynomial.

C. Short answer type question : 2x5=10

11.What must be added to $6x^5+5x^4+11x^3 -3x^2+x+5$ so that it may be exactly divisible by $3x^2-2x+4$?

12. Find all zeros of $f(x) = 2x^4-2x^3-7x^2+3x+6$ if its two zeros are - √(3/2) and (√3/2) .

13. Using Euclid's division algorithm, find whether the pair of numbers 847, 2160 are coprimes or not .

14. Prove that the square of any positive integer is of the form 3m or, 3m + 1 but not of the form 3m + 2.

15. There are 156, 208 and 260 students in groups A, B and C respectively. Buses are to be hired to take them for a field trip. Find the minimum number of buses to be hired, if the same number studets should be accommodated in each bus.

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