**ASSIGNMENT (2020-21)**

**CLASS - X SUBJECT – MATHEMATICS CH- 1(REAL NUMBERS)**

1. If $d=HCF\left(48,72\right),$ the value of $d$ is :

$\left(a\right)$ 24 $\left(b\right)$ 48 $\left(c\right)$ 12 $\left(d\right)$ 72

1. If the HCF of 55 and 99 is expressible in the form $55m-99$, then the value of $m$ is :

$\left(a\right)$ 4 $\left(b\right)$ 2 $\left(c\right)$ 1 $\left(d\right)$ 3

1. $5-2\sqrt{3}$ is

$\left(a\right)$ an integer $\left(b\right)$ a rational number $\left(c\right)$ an irrational number $\left(d\right)$ none of these

1. Two natural numbers whose difference is 66 and the least common multiple is 360, are :

$\left(a\right)$ 120 and 54 $\left(b\right)$ 90 and 24 $\left(c\right)$ 180 and 114 $\left(d\right)$ 130 and 64

1. The decimal expansion of the rational number $\frac{33}{2^{2}.5}$ will terminate after

$\left(a\right)$ one decimal place $\left(b\right)$ two decimal place $\left(c\right)$ three decimal place $\left(d\right)$ more than 3 decimal place

1. Write the exponent of 3 in the prime factorization of 162.
2. Given that HCF (435, 725) = 145 and LCM (435, 725) = K × 725. Find k.
3. Show that any positive odd integer is of the form 6q + 1 or 6q + 3 or 6q + 5 where q is same integer.
4. Find two numbers nearest to 1, 00,000 which are divisible by each of 1, 2, 3, 4, 5, 6, 7, 8. 9 and 10.
5. A rectangular courtyard is 12 m 70 cm land and 6 m 20 cm broad. It is to be paved with square tiles of the same size. Find the least possible number of such tiles.
6. Use Euclid’s division lemma to show that the cube of any positive integer is of form $9m,9m+1 or 9m+8$ .
7. Use Euclid’s division lemma to show that the square of any positive integer is of form $5q,5q+2 or 5q+3$ .
8. The number 525 and 3000 are both divisible only by 3, 5, 15, 25 and 75. What is HCF of 525 and 3000? Justify your answer.
9. Show that only one of the numbers $n, n+2 $and $n+4$ is divisible by 3.
10. Find the smallest number when increased by 20 is exactly divisible by 90 and 144.