ACADEMIC YEAR 2022-23

Grade: X

Subject: MATHEMATICS

CH – 1 - REAL NUMBERS - ASSIGNMENT -1

1. Let $x = \dfrac{7}{20 \times 25}$ be a rational number. Then x has decimal expansion, which terminates:
    (a) after four places of decimal   (b) after three places of decimal
    (c) after two places of decimal   (d) after five places of decimal

2. If HCF and LCM of two numbers are 4 and 9696, then the product of the two numbers is:
    (a) 9696   (b) 24242   (c) 38784   (d) 4848

3. If two positive integers p and q can be expressed as $p = ab^2$ and $q = a^3b$; a, b being prime numbers, then LCM (p, q) is
    (a) ab (b) a^2b^2 (c) a^3b^2 (d) a^3b^3

4. Write a rational number between $\frac{1}{4}$ and $\frac{1}{3}$.

5 . Prove that $\sqrt{5}$ is irrational.

6. Prove that $\sqrt{2} + 5$ is irrational

7. Find the HCF and LCM of 306 and 54. Verify that HCF x LCM = Product of two numbers

8.. Is 7 x 6 x 5 x 4 x 3 x 2 x 1 + 5   a composite number ? Justify your answer .

9. Without actually performing the long division, find if 987/ 10500 will have a terminating (repeating) decimal expansion. Give reasons for your answer.

10. A sweet seller has 420 kaju burfis and 130 badam burfis she wants to stack them in such a way that each stack has the same number, and they take up the least area of the tray. What is the number of burfis that can be placed in each stack for this purpose?

11. Find the largest number which divides 245 and 1029 leaving remainder 5 in each case.

12. Show that the number of the form 7^n, $n \in N$ cannot have unit digit zero.

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