10th Chapter Number System CBSE Test Paper – 04

Choose the correct option.

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

   A. a rational number   B. a natural number

   C. equal to zero   D. an irrational number

2. Let $x = \dfrac{7}{22 \times 53}$ 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

3. The decimal expansion of $\dfrac{63}{72 \times 175}$ is:

   A. Terminating   B. Non-terminating

   C. Non terminating and repeating   D. None of these

4. 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

5. $(2 + \sqrt{3} + \sqrt{5})$ is a:

   A. natural number   B. Integer number

   C. Rational number   D. Irrational number

6. If $\left(\dfrac{9}{7}\right)^{3} \times \left(\dfrac{49}{81}\right)^{2x-6} = \left(\dfrac{7}{9}\right)^{9}$, the value of x is:

   A. 12   B. 9   C. 8   D. 6

7. The number .211 2111 21111 211111....... is a:

   A. terminating decimal

   B. non-terminating repeating decimal

   C. non-terminating decimal which is non-repeating

   D. None of the above

8. If $(m)^{n} = 32$, where m and and n are positive integers, then the value of $(n)^{mn}$ is:

   A. 32   B. 25   C. (5)10   D. (5)25

9. The number 0.57 in the $\dfrac{p}{q}$ form (q ≠ 0) is:

   A. $\dfrac{19}{35}$ B. $\dfrac{57}{99}$ C. $\dfrac{57}{95}$ D. $\dfrac{19}{30}$

10. 0.57 can be written as $\dfrac{p}{q}$, $q \neq 0$ as:

A. $\dfrac{26}{45}$ B. $\dfrac{13}{27}$ C. $\dfrac{13}{29}$ D. $\dfrac{57}{99}$

11. Any one of the numbers a, $(a + 2)$ and $(a + 4)$ is a multiple of:

A. 2   B. 3   C. 5   D. 7

12. If p is a prime number and p divides k^2, then p divides:

A. $2k^2$ B. k C. $3k$ D. None of these

13. For some integer m, every even integer is of the form

(A) m (B) $m + 1$ (C) $2m$ (D) $2m + 1$

14. For some integer q, every odd integer is of the form

(A) q (B) $q + 1$ (C) $2q$ (D) $2q + 1$

15. $n^2 - 1$ is divisible by 8, if n is

(A) an integer   (B) a natural number   (C) an odd integer   (D) an even integer

16. If the HCF of 65 and 117 is expressible in the form $65m - 117$, then the value of m is

(A) 4   (B) 2   (C) 1   (D) 3

17. The largest number which divides 70 and 125, leaving remainders 5 and 8, respectively, is

(A) 13   (B) 65   (C) 875   (D) 1750

18. If two positive integers a and b are written as $a = x3y2$ and $b = xy3$; x, y are prime numbers, then HCF (a, b) is

(A) xy (B) xy^2 (C) x^3y^3 (D) x^2y^2

19. 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

20. The product of a non-zero rational and an irrational number is

(A) always irrational (B) always rational(C) rational or irrational (D) one