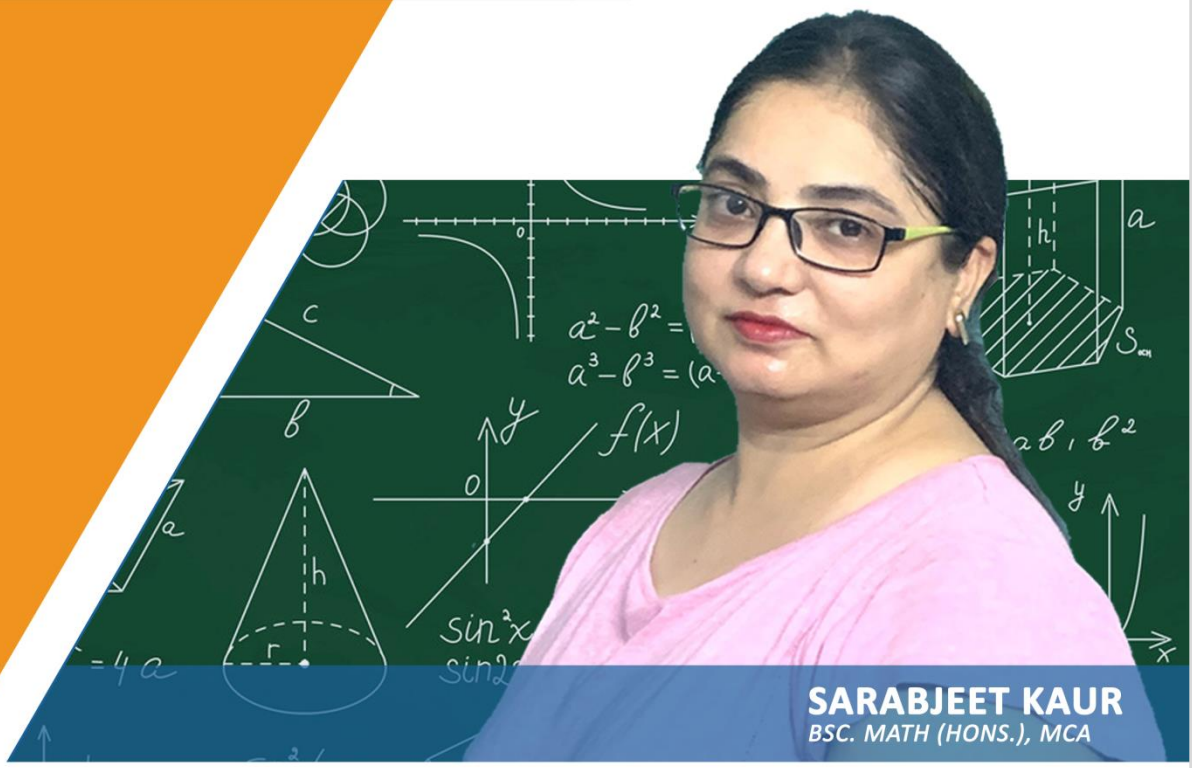

GRADE 10TH MATHS

CHAPTER 1

REAL NUMBERS

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☆ Multiple Choice Questions, with **only** one correct option.

Q01. The smallest prime number is:

(a) 0 (b) 1 (c) 2 (d) 3

Q02. The sum of first five prime numbers is:

(a) 26 (b) 15 (c) 39 (d) 28

Q03. Total prime numbers between 1 and 100 are:

(a) 31 (b) 25 (c) 22 (d) 20

Q04. The unit's digit obtained on simplifying $207\times781\times39\times94$ is:

(a) 9 (b) 1 (c) 7 (d) 2

Q05. The number $\sqrt{3}$ is a/an:

(a) integer (b) rational number

(c) irrational number (d) None of these

Q06. The HCF and LCM of 6, 72 and 120 is, respectively:

(a) 8, 360 (b) 6, 340 (c) 6, 360 (d) None of these

Q07. The total number of even prime numbers is:

(a) 0 (b) 1 (c) 2 (d) None of these

Q08. $\frac{22}{7}$ is a:

(a) prime number (b) an integer

(c) a rational number (d) an irrational number

Q09. The sum of two numbers is 37 and their product is 342. The numbers are:

(a) 18, 19 (b) 23, 14 (c) 24, 13 (d) 28, 9

Q10. A number is as bigger than 22 as much it is smaller than 72. The number is:

(a) 92 (b) 47 (c) 24 (d) None of these

Q11. If HCF and LCM of two numbers are 4 and 9696, then the product of two numbers is:

(a) 9696 (b) 24242 (c) 38784 (d) 4848

Q12. $5+\sqrt{2}+\sqrt{3}$ is:

(a) a natural number (b) an integer

(c) a rational number (d) an irrational number

Q13. If $\left(\frac{9}{7}\right)^3\times\left(\frac{49}{81}\right)^{2x-6}=\left(\frac{7}{9}\right)^9$ then, the value of x is:

(a) 12 (b) 9 (c) 8 (d) 6

Q14. 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 these

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Q15. If $m^n = 32$, where m and n are positive integers, then the value of n^{mn} is:

(a) 32 (b) 25 (c) 5^{10} (d) 5^{25}

Q16. Any one of the numbers a, $a+2$ and $a+4$ is a multiple of:

(a) 2 (b) 3 (c) 5 (d) 7

Q17. 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

Q18. If the HCF of 85 and 153 is expressible in the form of $85n - 153$ then, the value of n is:

(a) 3 (b) 2 (c) 4 (d) 1

Q19. Given that LCM (91, 26) = 182 then, HCF (91, 26) is:

(a) 13 (b) 26 (c) 7 (d) 9

Q20. Out of the four numbers (i) $\left(\sqrt{5} - \frac{1}{\sqrt{5}}\right)^3$ (ii) $2.123\overline{123}$ (iii) 2.123123... (iv) $\left(2\sqrt{3} - \sqrt{2}\right)\left(2\sqrt{3} + \sqrt{2}\right)$, the irrational number is:

(a) i (b) ii (c) iii (d) iv

Q21. $7 \times 11 \times 13 + 6$ is:

(a) a prime number (b) a composite number
(c) an even number (d) None of these

Q22. If $p^n = (a \times 5)^n$, for p^n to end with the digit zero a = _____ for any natural number n.

(a) any natural number (b) an odd number
(c) any even number (d) None of these

Q23. HCF is always:

(a) multiple of LCM (b) factor of LCM
(c) divisible by LCM (d) Option a and c both

Q24. In Euclid's division lemma where $a = bq + r$ and a, b are positive integers, which one is correct:

(a) $0 < r \le b$ (b) $0 \le r < b$ (c) $0 < r < b$ (d) $0 \le r \le b$

Q25. If p is a positive rational number which is not a perfect square then, $-3\sqrt{p}$ is:

(a) an integer (b) rational number
(c) irrational number (d) Option (a) and (c) both

Q26. $2 - \sqrt{5}$ is:

(a) a rational number (b) a natural number
(c) equal to zero (d) an irrational number

Q27. The number given below which always ends with the digit 6 for all natural nos. n is:

(a) 4^n (b) 2^n (c) 6^n (d) 8^n

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Q28. $(\sqrt{2}-\sqrt{5})(\sqrt{5}+\sqrt{2})$ is:

(a) a rational number (b) a natural number

(c) equal to zero (d) an irrational number

Q29. Let $x=\frac{7}{2^2\times5^3}$ 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

Q30. The decimal expansion of $\frac{63}{72\times175}$ is:

(a) terminating (b) non-terminating

(c) non-terminating and repeating (d) None of these

Q31. 2.35 is:

(a) an integer (b) a rational number

(c) an irrational no. (d) None of these

Q32. Which one is not a natural number:

(a) $\sqrt{25}$ (b) $\sqrt{121}$ (c) $\sqrt{100}$ (d) $\sqrt{7}$

Q33. $(3\sqrt{5}-7\sqrt{3})^2$ is equal to:

(a) $2115-\sqrt{192}$ (b) $21\sqrt{15}-192$ (c) $192+21\sqrt{15}$ (d) $192-42\sqrt{15}$

Q34. Which number is natural?

(a) –8 (b) 2 (c) 0 (d) $\frac{1}{2}$

Q35. Zero is:

(a) natural no. (b) whole no. (c) non divisible no. (d) divisible no.

Q36. Which of the following is a rational number having terminating decimal expansion:

(a) $\frac{36}{7}$ (b) $\frac{41}{80}$ (c) $\frac{329}{409}$ (d) All of these options

Q37. Which one of the following statement is true?

(a) Every natural no. is a whole no. (b) Every integer is a whole no.

(c) Every rational no. is a whole no. (d) None of these

Q38. $6\sqrt{5}\times2\sqrt{5}$ is equal to:

(a) 70 (b) 50 (c) 60 (d) 55

Q39. LCM of 25, 35 and 105 is:

(a) 555 (b) 565 (c) 575 (d) None of these