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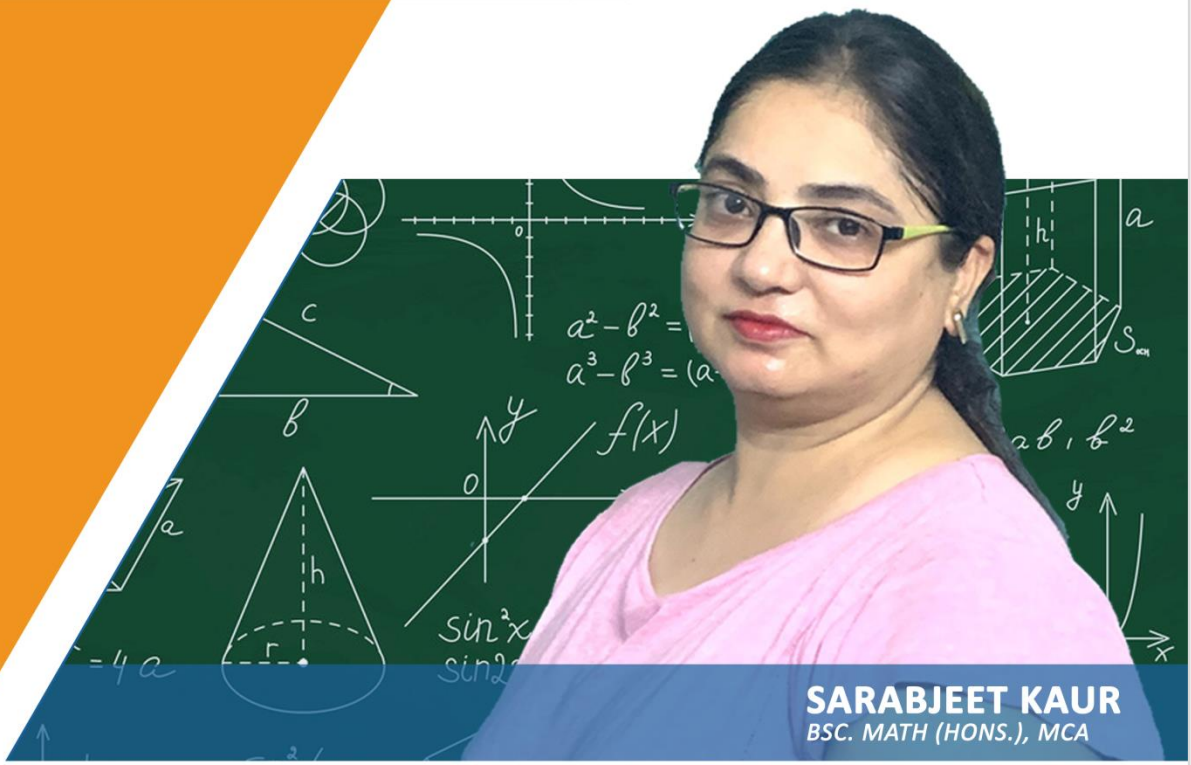

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BSC. MATH (HONS.), MCA

GRADE 10TH MATHS

CHAPTER 1

REAL NUMBERS

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Class 10 Maths MCQs Chapter 1 Real Numbers

1. The decimal form of is

(a) terminating

(b) non-termining

(c) non-terminating non-repeating

(d) none of the above

2. HCF of 8, 9, 25 is

(a) 8

(b) 9

(c) 25

(d) 1

3. Which of the following is not irrational?

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

(b) $(\sqrt{2} + \sqrt{3})^2$

(c) $(\sqrt{2} - \sqrt{3})(\sqrt{2} + \sqrt{3})$

(d)

4. The product of a rational and irrational number is

(a) rational

(b) irrational

(c) both of above

(d) none of above

5. The sum of a rational and irrational number is

(a) rational

(b) irrational

(c) both of above

(d) none of above

6. The product of two different irrational numbers is always

(a) rational

(b) irrational

(c) both of above

(d) none of above

7. The sum of two irrational numbers is always

(a) irrational

(b) rational

(c) rational or irrational

(d) one

8. If b = 3, then any integer can be expressed as a =

(a) 3q, 3q+ 1, 3q + 2

(b) 3q

(c) none of the above

(d) 3q+ 1

9. The product of three consecutive positive integers is divisible by

(a) 4

(b) 6

(c) no common factor

(d) only 1

10. The set A = {0,1, 2, 3, 4,5^2} represents the set of

(a) whole numbers

(b) integers

(c) natural numbers

(d) even numbers

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11. Which number is divisible by 11?

(a) 1516

(b) 1452

(c) 1011

(d) 1121

13. The largest number that will divide 398,436 and 542 leaving remainders 7,11 and 15 respectively is

(a) 17

(b) 11

(c) 34

(d) 45

14. There are 312, 260 and 156 students in class X, XI and XII respectively. Buses are to be hired to take these students to a picnic. Find the maximum number of students who can sit in a bus if each bus takes equal number of students

(a) 52

(b) 56

(c) 48

(d) 63

15. There is a circular path around a sports field. Priya takes 18 minutes to drive one round of the field. Harish takes 12 minutes. Suppose they both start at the same point and at the same time and go in the same direction. After how many minutes will they meet ?

(a) 36 minutes

(b) 18 minutes

(c) 6 minutes

(d) They will not meet

16. Express 98 as a product of its primes

(a) 22x7

(b) 22x72

(c) 2x72

(d) 23x7

17. Three farmers have 490 kg, 588 kg and 882 kg of wheat respectively. Find the maximum capacity of a bag so that the wheat can be packed in exact number of bags.

(a) 98 kg

(b) 290 kg

(c) 200 kg

(d) 350 kg

18. For some integer p, every even integer is of the form

(a) 2p + 1

(b) 2p

(c) p + 1

(d) p

19. For some integer p, every odd integer is of the form

(a) 2p + 1

(b) 2p

(c) p + 1

(d) p

20. $m^2 - 1$ is divisible by 8, if m is

(a) an even integer

(b) an odd integer

(c) a natural number

(d) a whole number

21. If two positive integers A and B can be ex-pressed as $A = xy^3$ and $B = xy^2z$; x, y being prime numbers, the LCM (A, B) is

(a) xy^2

(b) x^4y^2z

(c) x^4y^3

(d) x^4y^3z

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

(a) always rational

(b) rational or irrational

(c) always irrational

(d) zero

23. If two positive integers A and B can be expressed as $A = xy^3$ and $B = x^4y^2z$; x, y being prime numbers then HCF (A, B) is

(a) xy^2

(b) x^4y^2z

(c) x^4y^3

(d) x^4y^3z

24. The largest number which divides 60 and 75, leaving remainders 8 and 10 respectively, is

(a) 260

(b) 75

(c) 65

(d) 13

25. The least number that is divisible by all the numbers from 1 to 5 (both inclusive) is

(a) 5

(b) 60

(c) 20

(d) 100

26. The least number that is divisible by all the numbers from 1 to 8 (both inclusive) is

(a) 840

(b) 2520

(c) 8

(d) 420

27. The decimal expansion of the rational number will terminate after:

(a) one decimal place

(b) two decimal places

(c) three decimal places

(d) four decimal places

28. The decimal expansion of the rational number will terminate after:

(a) one decimal place

(b) two decimal places

(c) three decimal places

(d) four decimal places

29. The product of two consecutive natural numbers is always:

(a) prime number

(b) even number

(c) odd number

(d) even or odd

30. If the HCF of 408 and 1032 is expressible in the form 1032 x 2 + 408 x p, then the value of p is

(a) 5

(b) -5

(c) 4

(d) -4

31. The number in the form of 4p + 3, where p is a whole number, will always be

(a) even

(b) odd

(c) even or odd

(d) multiple of 3

32. When a number is divided by 7, its remainder is always:

(a) greater than 7

(b) at least 7

(c) less than 7

(d) at most 7

33. $(6 + 5\sqrt{3}) - (4 - 3\sqrt{3})$ is

(a) a rational number

(b) an irrational number

(c) a natural number

(d) an integer

34. If HCF (16, y) = 8 and LCM (16, y) = 48, then the value of y is

(a) 24

(b) 16

(c) 8

(d) 48

35. According to the fundamental theorem of arithmetic, if T (a prime number) divides b^2, b > 0, then

(a) T divides b

(b) b divides T

(c) T^2 divides b^2

(d) b^2 divides T^2

36. The number $\sqrt{3 + 4}$' is

(a) natural number

(b) rational number

(c) irrational number

(d) rational or irrational

37. If LCM (77, 99) = 693, then HCF (77, 99) is

(a) 11

(b) 7

(c) 9

(d) 22

38. Euclid's division lemma states that for two positive integers a and b, there exist unique integer q and r such that a = bq + r, where r must satisfy

(a) $a < r < b$

(b) $0 < r \leq b$

(c) $1 < r < b$

(d) $0 \leq r < b$

39. For positive integers a and 3, there exist unique integers q and r such that a = 3q + r, where r must satisfy:

(a) $0 < r < 3$

(b) $1 < r < 3$

(c) $0 < r < 3$

(d) $0 < r < 3$

40. Find the greatest number of 5 digits, that will give us remainder of 5 when divided by 8 and 9 respectively.

(a) 99921

(b) 99931

(c) 99941

(d) 99951

41. For some integers p and 5, there exist unique integers q and r such that p - 5q + r. Possible values of r are

(a) 0 or 1

(b) 0, 1 or 2

(c) 0, 1, 2 or 3

(d) 0, 1, 2, 3 or 4

42. If two positive integers a and b are written as a = x'y1 and b = xyi, where x, y are prime numbers, then HCF(a, b) is

Also, find LCM of (a, b). [NCERT Exemplar Problems; Delhi 2019]

(a) xy

(b) xy^2

(c) x^3y^3

(d) x^2y^2

43. If two positive integers p and q can be expressed as $p = ab^2$ and $q = c^3b$; where a, b being prime numbers, then LCM (p, q) is equal to [NCERT Exemplar Problems]

(a) ab

(b) cb^2

(c) a^3b^2

(d) $cÂ²b3$

44. The ratio between the LCM and HCF of 5, 15, 20 is:

(a) 9 : 1

(b) 4:3

(c) 11:1

(d) 12:1

45. Two alarm clocks ring their alarms at regular intervals of 50 seconds and 48 seconds. If they first beep together at 12 noon, at what time will they beep again for the first time ?

(a) 12.20 pm

(b) 12.12 pm

(c) 12.11pm

(d) none of these

46. If A = 2n + 13, B = n + 7, where n is a natural number, then HCF of A and B is:

(a) 2

(b) 1

(c) 3

(d) 4

47. There are 576 boys and 448 girls in a school that are to be divided into equal sections of either boys or girls alone. The total number of sections thus formed are:

(a) 22

(b) 16

(c) 36

(d) 21

48. The HCF of 2472, 1284 and a third number N is 12. If their LCM is 23 x 32 x 5 x 103 x 107, then the number Nis :

(a) 22 x 32 x 7

(b) 22 x 33 x 103

(c) 22 x 32 x 5

(d) 24 x 32 x ll

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

(a) 120 and 54

(b) 90 and 24

(c) 180 and 114

(d) 130 and 64

50. HCF of 52 x 32 and 35 x 53 is:

(a) 53 x 35

(b) 5 x 33

(c) 53 x 32

(d) 52 x 32

(a) terminating

(b) non-termining

(c) non-terminating non-repeating

(d) none of the above

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