

Tarun Classes of Mathematics

IIT-JEE Mains | CBSE | PU-CET | NDA

Talwara Township, Hoshiarpur | +91 9463672753 | tarunclasses.in

Binary Numbers

Subjects : Maths

Previous Year Questions

Maths - Section A (MCQ.)

- What is the binary number equivalent to decimal number 1011?
A) 1011 B) 111011 C) 11111001 D) 111110011
- What is $(1110011)_2 \div (10111)_2$ equal to?
A) $(101)_2$ B) $(1001)_2$ C) $(111)_2$ D) $(1011)_2$
- If $x^3 + y^3 = (100010111)_2$ and $x + y = (11111)_2$, then what is $(x - y)^2 + xy$ equal to?
A) $(1101)_2$ B) $(1001)_2$ C) $(1011)_2$ D) $(1111)_2$
- The number $(1101101 + 1011011)_2$ can be written in decimal system as
A) $(198)_{10}$ B) $(199)_{10}$ C) $(200)_{10}$ D) $(201)_{10}$
- A binary number is represented by $(cdccddcccd)_{10}$, where $c > d$. What is its decimal equivalent?
A) 1848 B) 2048 C) 2842 D) 2872
- The remainder and the quotient of the binary division $(101110)_2 \div (110)_2$ are respectively
A) $(111)_2$ and $(100)_2$ B) $(100)_2$ and $(111)_2$
C) $(101)_2$ and $(101)_2$ D) $(100)_2$ and $(100)_2$
- What is the binary equivalent of the decimal number 0.3125?
A) 0.0111 B) 0.101 C) 0.0101 D) 0.1101
- If the number 235 in decimal system is converted into binary system, then what is the resulting number?
A) $(11110011)_2$ B) $(11101011)_2$ C) $(11110101)_2$ D) $(11011011)_2$
- The decimal number $(127.25)_{10}$, when converted to binary number, takes the form
A) $(11111111.11)_2$ B) $(1111110.01)_2$ C) $(1110111.11)_2$ D) $(1111111.01)_2$
- If $(11101011)_2$ is converted decimal system, then the resulting number is
A) 235 B) 175 C) 160 D) 126
- What is $(1000000001)_2 - (0.0101)_2$ equal to ?
A) $(512.6775)_{10}$ B) $(512.6875)_{10}$
C) $(512.6975)_{10}$ D) $(512.0909)_{10}$
- What is $(1001)_2$ equal to?
A) $(5)_{10}$ B) $(9)_{10}$ C) $(17)_{10}$ D) $(11)_{10}$

13. What is the sum of the two numbers $(11110)_2$ and $(1010)_2$?
- A) $(101000)_2$ B) $(110000)_2$ C) $(100100)_2$ D) $(101100)_2$
14. The binary representation of the decimal number 45 is
- A) 110011 B) 101010 C) 1101101 D) 101101
15. The number 83 is written in the binary system as
- A) 100110 B) 101101 C) 1010011 D) 110110
16. A number in binary system is 110001 . It is equal to which one of the following numbers in decimal system?
- A) 45 B) 46 C) 48 D) 49
17. The number 292 in decimal system is expressed in binary system by
- A) 100001010 B) 100010001 C) 100100100 D) 101010000
18. The decimal number $(57.375)_{10}$ when converted to binary number takes the form :
- A) $(111001.011)_2$ B) $(100111.110)_2$ C) $(110011.101)_2$ D) $(111011.011)_2$
19. What is the decimal number representation of the binary number $(11101.001)_2$?
- A) 30.125 B) 29.025 C) 29.125 D) 28.025
20. The decimal representation of the number $(1011)_2$ in binary system is :
- A) 5 B) 7 C) 9 D) 11
21. In binary system the decimal number 0.3 can be expressed as
- A) $(0.01001 \dots)_2$ B) $(0.10110 \dots)_2$
 C) $(0.11001 \dots)_2$ D) $(0.10101 \dots)_2$
22. In the binary system of numbers let $a = 00111$ and $b = 01110$, then in decimal system what is b/a equal to?
- A) 1 B) 2 C) 4 D) 5
23. The number 10101111 in binary system is represented in decimal system by which one of the following numbers?
- A) 157 B) 175 C) 571 D) 751
24. What is the equivalent binary number of the decimal number 13.625?
- A) 1101.111 B) 1111.101 C) 1101.101 D) 1111.111
25. What is the binary number equivalent of the decimal number 32.25?
- A) 100010.1 B) 100000.1 C) 100010.01 D) 100000.01
26. What is the value of
$$\frac{(0.101)_2^{(11)_2} + (0.011)_2^{(11)_2}}{(0.101)_2^{(10)_2} - (0.101)_2^{(01)_2} (0.011)_2^{(01)_2} + (0.011)_2^{(10)_2}} ?$$
- A) $(0.001)_2$ B) $(0.01)_2$ C) $(0.1)_2$ D) $(1)_2$
27. What is $(1111)_2 + (1001)_2 - (1010)_2$ equal to?
- A) $(111)_2$ B) $(1100)_2$ C) $(1110)_2$ D) $(1010)_2$
28. The sum of the binary numbers $(11011)_2, (10110110)_2$ and $(10011x0y)_2$ is the binary number $(101101101)_2$. What are the values of x and y ?
- A) $x = 1, y = 1$ B) $x = 1, y = 0$ C) $x = 0, y = 1$ D) $x = 0, y = 0$

29. The number 251 in decimal system is expressed in binary system by:

- A) 11110111 B) 11111011 C) 11111101 D) 11111110

30. In the binary equation

$$(1p101)_2 + (10ql)_2 = (100r00)_2$$

where p, q and r are binary digits, what are the possible values of p, q and r respectively?

- A) 0,1,0 B) 1,1,0 C) 0,0,1 D) 1,0,1



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1 - A	2 - A	3 - B	4 - C	5 - D	6 - B	7 - C	8 - B	9 - D	10 - A
11 - B	12 - B	13 - A	14 - D	15 - C	16 - D	17 - C	18 - A	19 - C	20 - D
21 - A	22 - B	23 - B	24 - C	25 - D	26 - C	27 - C	28 - B	29 - B	30 - A

