Truth Table of XOR Gate

A	*B*	*X*
0	0	0
0	1	1
1	0	1
1	1	0

$X = A \oplus B$

$X = \overline{A}B + A\overline{B}$

Tit-Bits

- **UNICODE** uses 16-bits to represent a symbol in the data. It represents any non-english character, scientific symbol in any language like Chinese, Japanese.
- One's complement of binary number is defined as the value obtained by inverting all the bits
  For example, 110100
  One's complement is
  001011

QUESTION BANK

1. There are how many types of number system?
(1) One (2) Two (3) Three (4) Four

2. Modern computers represent characters and numbers internally using one of the following number systems.
(1) Penta (2) Octal
(3) Hexa (4) Septa
(5) Binary

3. In the binary language, each letter of the alphabet, each number and each special character is made up of a unique combination of
(1) 8 bytes (2) 8 KB
(3) 8 characters (4) 8 bits

4. To perform calculation on stored data computer, uses ..... number system.
(1) decimal (2) hexadecimal
(3) octal (4) binary

5. Which of the following is not a binary number?
(1) 001 (2) 101
(3) 202 (4) 110

6. The number system based on '0' and '1' only, is known as
(1) binary system (2) barter system
(3) number system (4) hexadecimal system

7. Binary system is also called
(1) base one system (2) base two system
(3) base system (4) binary system

8. Which of the following is an example of binary number?
(1) 6AH1 (2) 100101
(3) 005 (4) ABCD

9. Numbers that are written with base 10 are classified as
(1) decimal number
(2) whole number
(3) hexadecimal number
(4) exponential integers
(5) mantissa

10. Decimal number system is the group of ..... numbers.
(1) 0 or 1 (2) 0 to 9
(3) 0 to 7 (4) 0 to 9 and A to F

11. The octal system
(1) needs less digits to represent a number than in the binary system
(2) needs more digits to represent a number than in the binary system
(3) needs the same number of digits to represent a number as in the binary system
(4) needs the same number of digits to represent a number as in the decimal system

12. A hexadecimal number is represented by
(1) three digits (2) four binary digits
(3) four digits (4) All of these

13. Hexadecimal number system has ..... base.
(1) 2 (2) 8 (3) 10 (4) 16

14. Hexadecimal number system consists of
(1) 0 to 9 (2) A to F
(3) Both (1) and (2) (4) Either (1) or (2)

15. A hexadigit can be represented by **[IBPS Clerk 2012]**
(1) three binary (consecutive) bits
(2) four binary (consecutive) bits
(3) eight binary (consecutive) bits
(4) sixteen binary (consecutive) bits
(5) None of the above

16. Which of the following is invalid hexadecimal number?
(1) A0XB (2) A0F6
(3) 4568 (4) ACDB

17. What type of information system would be recognised by digital circuits?
(1) Hexadecimal system
(2) Binary system
(3) Both (1) and (2)
(4) Only roman system

18. The binary equivalent of decimal number 98 is **[IBPS Clerk 2012]**
(1) 1110001 (2) 1110100
(3) 1100010 (4) 1111001
(5) None of these

19. Conversion of decimal number $(71)_{10}$ to its binary number equivalent is **[IBPS Clerk 2012]**
(1) $(110011)_2$ (2) $(1110011)_2$
(3) $(0110011)_2$ (4) $(1000111)_2$
(5) None of these

20. What is the value of the binary number 101?
(1) 3 (2) 5 (3) 6 (4) 101

21. Decimal equivalent of $(1111)_2$ is **[IBPS Clerk 2012]**
(1) 11 (2) 10 (3) 1 (4) 15
(5) 13

22. The decimal equivalent of binary number $(1010)_2$ is
(1) 8 (2) 9 (3) 10 (4) 11

23. The binary number 10101 is equivalent to decimal number .....
(1) 19 (2) 12 (3) 27 (4) 21

24. Which of the following is octal number equivalent to binary number $(110101)_2$?
(1) 12 (2) 65
(3) 56 (4) 1111

25. Which of the following is a binary number equivalent to octal number $(.431)_8$?
(1) $(100011001)_2$ (2) $(.100011001)_2$
(3) $(100110100)_2$ (4) $(.100110001)_2$

26. To convert binary number to decimal, multiply the all binary digits by power of
(1) 0 (2) 2
(3) 4 (4) 6

27. Which of the following is hexadecimal number equivalent to binary number $(1111\ 1001)_2$?
(1) 9F (2) FF
(3) 99 (4) F9

28. Conversion of binary number $(1001001)_2$ to hexadecimal is
(1) $(40)_{16}$ (2) $(39)_{16}$
(3) $(49)_{16}$ (4) $(42)_{16}$

29. Which of the following is the correct binary form of $(4A2.8D)_{16}$? **[IBPS PO Mains 2017]**
(1) $(010010100010.10001101)_2$
(2) $(010110100010.11101101)_2$
(3) $(011110100010.10001101)_2$
(4) $(010010111110.10001101)_2$
(5) None of the above

30. Which of the following is an octal number equal to decimal number $(896)_{10}$?
(1) 0061 (2) 6001
(3) 1006 (4) 1600

31. Conversion of decimal number $(42)_{10}$ to its octal number equivalent is
(1) $(57)_8$ (2) $(42)_8$
(3) $(47)_8$ (4) $(52)_8$

32. Determine the octal equivalent of $(432267)_{10}$
(1) $(432267)_8$ (2) $(346731)_8$
(3) $(2164432)_8$ (4) None of these

33. Determine the decimal equivalent of $(456)_8$
(1) $(203)_{10}$ (2) $(302)_{10}$
(3) $(400)_{10}$ (4) $(402)_{10}$

34. Conversion of octal number $(3137)_8$ to its decimal equivalent is
(1) $(1631)_{10}$ (2) $(1632)_{10}$
(3) $(1531)_{10}$ (4) $(1931)_{10}$

35. Conversion of decimal number $(15)_{10}$ to hexadecimal number is
(1) $(14)_{16}$ (2) $(13)_{16}$ (3) $(F)_{16}$ (4) $(7F)_{16}$

36. Which of the following is a hexadecimal number equal to 3431 octal number?
(1) 197 (2) 917 (3) 791 (4) 971
(5) 719

37. The method used for the conversion of octal to decimal fraction is
(1) digit is divided by 8
(2) digit is multiplied by the corresponding power of 8
(3) digit is added with 8
(4) digit is subtracted with 8

38. MSD refers as
(1) Most Significant Digit
(2) Many Significant Digit
(3) Multiple Significant Digit
(4) Most Significant Decimal

39. LSD stands for
(1) Long Significant Digit
(2) Least Significant Digit
(3) Large Significant Digit
(4) Longer Significant Decimal

Directions (40 and 41) *Triangle represents Δ (1) and circle represents o (0). If triangle appears in unit's place then its value is 1. If it appears in 10's place its value is doubled to 2 like that it continues. Using the given terminology answer the following questions.*
For example,

$$\Delta = 1$$
$$\Delta o \Delta = 4, 0, 1 = 4 + 0 + 1$$
$$\Delta o = 2$$ **[IBPS PO Mains 2017]**

40. How will you represent '87' in this code language?
(1) oΔΔΔoΔΔ (2) ΔoΔoΔΔΔ
(3) ΔΔoΔΔΔΔ (4) ΔooΔooΔ
(5) ΔΔoΔΔΔo

41. What will be the code for ΔΔoooΔo ?
(1) 98 (2) 95 (3) 96 (4) 94
(5) 99

42. How many values can be represented by a single byte?
(1) 4 (2) 16
(3) 64 (4) 256

43. Which of the following is not a computer code?
(1) EBCDIC (2) ASCII
(3) CISC (4) UNICODE

44. ASCII stands for **[IBPS Clerk 2014, 2018]**
(1) American Special Computer for Information Interaction
(2) American Standard Computer for Information Interchange
(3) American Special Code for Information Interchange
(4) American Special Computer for Information Interchange
(5) American Standard Code for Information Interchange

45. The most widely used code that represents each character as a unique 8-bit code is **[UPSSSC 2017]**
(1) ASCII (2) UNICODE
(3) BCD (4) EBCDIC

46. Today's mostly used coding system is/are
(1) ASCII (2) EBCDIC
(3) BCD (4) Both (1) and (2)

47. In EBCDIC code, maximum possible characters set size is
(1) 356 (2) 756
(3) 556 (4) 256

48. Code 'EBCDIC' that is used in computing stands for
(1) Extension BCD Information Code
(2) Extended BCD Information Code
(3) Extension BCD Interchange Conduct
(4) Extended BCD Interchange Conduct

49. Most commonly used codes for representing bits are
(1) ASCII (2) BCD
(3) EBCDIC (4) All of these

50. The coding system allows non-english characters and special characters to be represented
(1) ASCII (2) UNICODE
(3) EBCDIC (4) All of these

51. Which of the following character set supports Japanese and Chinese fonts?
[IBPS Clerk Mains 2017]
(1) EBCDIC (2) ASCII
(3) BC (4) ECBI
(5) UNICODE

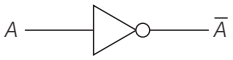
52. Two inputs *A* and *B* of NAND gate have 0 output, if
(1) *A* is 0 (2) *B* is 0
(3) Both are zero (4) Both are 1

53. Gate having output 1 only when one of its input is 1 is called
(1) AND (2) NOT
(3) OR (4) NOR

54. .....gate is also known as inverter.
(1) OR (2) NOT
(3) XOR (4) NAND

55. The only function of NOT gate is to .....
(1) stop signal
(2) invert input signal
(3) act as a universal gate
(4) double input signal

56. Following diagram depicts which logic gate? **[IBPS PO Mains 2017]**



(1) NOR gate (2) NOT gate
(3) OR gate (4) NAND gate
(5) None of these

57. The NAND gate is AND gate followed by .....
(1) NOT gate (2) OR gate
(3) AND gate (4) NOR gate

58. The NOR gate is OR gate followed by .....
(1) AND gate (2) NAND gate
(3) NOT gate (4) OR gate

59. The NOR gate output will be high if the two inputs are
(1) 00 (2) 01 (3) 10 (4) 11

60. Which of following are known as universal gates?
(1) NAND and NOR (2) AND and OR
(3) XOR and OR (4) AND

61. Gate whose output is 0 only when inputs are different is called
(1) XOR (2) XNOR (3) NOR (4) NAND

62. If Δ represents '1' and o represents '0'. What will be the one's complement of oΔΔooΔ?
[IBPS PO Mains 2017]
(1) 011001 (2) 100110
(3) 101010 (4) 000000
(5) 111111

ANSWERS

1. *(4)*	2. *(5)*	3. *(4)*	4. *(4)*	5. *(3)*	6. *(1)*	7. *(2)*	8. *(2)*	9. *(1)*	10. *(2)*
11. *(1)*	12. *(2)*	13. *(4)*	14. *(3)*	15. *(4)*	16. *(1)*	17. *(3)*	18. *(3)*	19. *(4)*	20. *(2)*
21. *(4)*	22. *(3)*	23. *(4)*	24. *(2)*	25. *(2)*	26. *(2)*	27. *(4)*	28. *(3)*	29. *(1)*	30. *(4)*
31. *(4)*	32. *(4)*	33. *(2)*	34. *(1)*	35. *(3)*	36. *(5)*	37. *(2)*	38. *(2)*	39. *(2)*	40. *(2)*
41. *(1)*	42. *(4)*	43. *(3)*	44. *(5)*	45. *(1)*	46. *(4)*	47. *(4)*	48. *(2)*	49. *(4)*	50. *(2)*
51. *(5)*	52. *(4)*	53. *(3)*	54. *(2)*	55. *(2)*	56. *(2)*	57. *(1)*	58. *(3)*	59. *(1)*	60. *(1)*
61. *(1)*	62. *(2)*								