1. There are \_\_\_\_\_\_ cells in a 4-variable K-map.

a. 4

b. 12

c. **16**

d. 18

2. A variable on its own or in its complemented form is known as a:

a. Product Term

b. **Literal**

c. Sum Term

d. None of the Mentioned

3. Which one of the following is not a valid rule of Boolean Algebra?

a. A+1=1

b. **A+A’=0**

c. A.A=A

d. A.A’=0

4. The minimum number of two i/p NAND gates required implementing two i/p OR gate is:

a. 1

b. 2

c. **3**

d. 5

5. The format used to present the logic output for the various combinations of logic inputs to a gate is called a:

a. Boolean constant

b. Boolean variable

c. **Truth table**

d. Input logic function

6. How many types of parity bits are found?

a. **2**

b. 3

c. 4

d. 1

7. Let A and B is the input of a subtractor then the borrow will be:

a. A .B’

b. **A’.B**

c. A+B

d. A.B

8. ASCII stands for:

a. African Standard Code For Information Interchange

b. American Standard Code For Integer Interchange

c. **American Standard Code For Information Interchange**

d. African Standard Code For Integer Interchange

9. Which of the following is self-complementing code?

a. 2421 code b. 84-2-1 code c. BCD d. **Both a & b**

Operation carried out by a NOT gate are also termed as:

a. **Inverting**

b. Converting

c. Reverting

d. Reversing

10. Logic gate in which any one of inputs is logic 1 results in output as logic 1 is termed as:

a. NOT gate

b. NOR gate

c. AND gate

d. **OR gate**

11. The Karnaugh map is also known as:

a. **Veitch diagram**

b. Venn diagram

c. Virtual diagram

d. Logic diagram

12. What is a parity bit?

1. **An error detection is achieved by adding an extra bit**
2. After addition, the carry is found
3. Bit generated during data transmission
4. None of the Mentioned

13. The output of an exclusive-NOR gate is HIGH if \_\_\_\_\_\_\_\_.

1. **The inputs are equal**
2. One input is HIGH, and the other input is LOW
3. The inputs are unequal
4. None of the above

14. Complement of the expression A’B + CD’ is

1. (A’ + B)(C’ + D)
2. **(A + B’)(C’ + D)**
3. (A’ + B)(C’ + D)
4. (A + B’)(C + D’)

15. The r’s complement of (10100)2 is:

a. 01011

b. **01100**

c. 01001

d. 10101

16. (r-1)’s complement of (2B)16 is

a. **D4**

b. D5

c. E4

d. E5

17. How many cells are there in a 5 variable K-map?

a. 16

b. 5

c. **32**

d. 8

18. ASCII has \_\_\_\_\_ characters

a. **128**

b. 127

c. 64

d. 16

19. On a K map, a grouping of 1’s produces:

a. A POS expression

b. **A SOP expression**

c. A don’t care conditions

d. AND-OR logic

20. y+(xz) = (x+y).(y+z) is:

a. **distributive property**

b. not true

c. commutative property

d. associative property

21.Which of the following is weighted code?

a. BCD code

b. 2421 code

c. Excess-3 code

d. **Both a & b**

22. What is the Boolean expression for 3 input OR gate?

a. **Y = a + b + c**

b. Y = a .b . c

c. Y = a – b – c

d. Y = a + b – c

23. Encryption is possible in:

a. Analog system

b. **Digital system**

c. Both of them

d. None of the above

# 24. For code conversion how many bits are required for BCD input and Excess-3 output?

* 1. 3 inputs and 2 outputs
  2. 4 inputs and 3 outputs
  3. **4 inputs and 4 outputs**
  4. None

25. Analog system is:

* 1. More immune to noise
  2. **Continuous signals**
  3. Both a and b
  4. Discrete signals