PANIMALAR INSTITUTE OF TECHNOLOGY
(JAISAKTHI EDUCATIONAL TRUST)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACCREDITED BY NATIONAL BOARD OF ACCREDITATION

MULTIPLE CHOICE QUESTIONS – UNIT I

Roll Number	**:**
Register Number	**:**
Subject code / Name	**: CS8352 / Digital Principles and System Design**
Year / Sem	**: II / III**
Date	**:**
Duration	**: 40 minutes**

1. The binary number 10101 is equivalent to decimal number ……..

a. 19
b. 12
c. 27
d. 21

2. **The universal gate is ……**

a. NAND gate
b. OR gate
c. AND gate
d. None of the above

3. **The inverter is ……**

a. NOT gate
b. OR gate
c. AND gate
d. None of the above

4. **The inputs of a NAND gate are connected together. The resulting circuit is …….**

a. OR gate
b. AND gate
c. NOT gate
d. None of the above

5. **The NOR gate is OR gate followed by ……**

a. AND gate
b. NAND gate
c. NOT gate
d. None of the above

6. **The NAND gate is AND gate followed by ……**

a. NOT gate
b. OR gate
c. AND gate
d. None of the above

7. **Digital circuit can be made by the repeated use of ……**

a. OR gates
b. NOT gates
c. NAND gates
d. None of the above

8. **The only function of NOT gate is to ……..**

a. Stop signal
b. Invert input signal
c. Act as a universal gate
d. None of the above

9. **When an input signal 1 is applied to a NOT gate, the output is ……**

a. 0
b. 1
c. Either 0 & 1
d. None of the above

10. **In Boolean algebra, the bar sign (-) indicates ……..**

a. OR operation
b. AND operation
c. NOT operation
d. None of the above

11. **2's complement of binary number 0101 is ……..**

a. 1011
b. 1111

c. 1101
d. 1110

12. **An OR gate has 4 inputs. One input is high and the other three are low. The output is …….**

a. Low
b. High
c. alternately high and low
d. may be high or low depending on relative magnitude of inputs

13. **Decimal number 10 is equal to binary number ……**

a. 1110
b. 1010
c. 1001
d. 1000

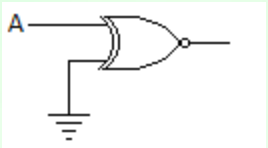
14. **Both OR and AND gates can have only two inputs.**

a. True
b. False

15. **In 2's complement representation the number 11100101 represents the decimal number**

a. +37
b. -31
c. +27
d. -27

16. **For the gate in the given figure the output will be ……..**



a. 0
b. 1
c. A
d. $\bar{A}$

17. **In the expression A + BC, the total number of minterms will be**

a. 2
b. 3
c. 4
d. 5

18. **The number of digits in octal system is ……**

a. 8
b. 7
c. 9
d. 10

19. **The expression Y = πM (0, 1, 3, 4) is ……..**

a. POS
b. SOP
c. Hybrid
d. none of these

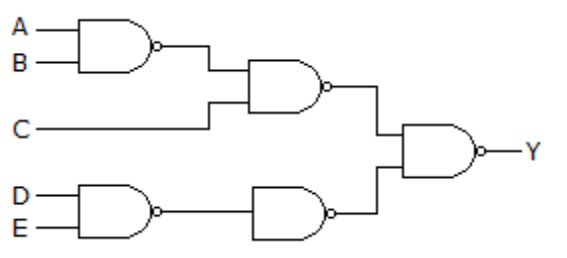
20. **Decimal 43 in hexadecimal is ……..**

a. B2
b. 2B
c. 2B
d. B2

21. **Decimal 43 in BCD number system is ……..**

a. 01000011
b. 01000011
c. 00110100
d. 01000100

22. **The circuit of the given figure realizes the function ……**



1. $Y = (\overline{A} + \overline{B})\,C + \overline{DE}$
2. $Y = \overline{A} + \overline{B} + \overline{C} + \overline{D} + \overline{E}$
3. AB + C +DE
4. AB + C(D + E)

23. **An AND gate has two inputs A and B and one inhibit input 3, Output is 1 if**

a. A = 1, B = 1, S = 1
b. A = 1, B = 1, S = 0

c. A = 1, B = 0, S = 1
d. A = 1, B = 0, S = 0

24. **The greatest negative number which can be stored is 8 bit computer using 2's complement arithmetic is ……..**

a. -256
b. -128
c. -255
d. -127

25. **$7BF_{16}$ = _____ 2**

a. 0111 1011 1110
b. 0111 1011 1111
c. 0111 1011 0111
d. 0111 1011 0011