COURSE: CMP 301 Computer Architecture

NAME: [redacted] MATRIC NUMBER: [redacted]

1. __ is a science that shows how the components of the computer system is connected together
A. Computer parts B. Computer architecture C. Computer hardware D. Computer business
2. How many Prime Implicants are there in Boolean Expression F=£(1,5,6,7,11,12,13,15)? A. 5 B. 4 C. 3 D. 2
3. Which of the following computer bus connects the CPU to the memory?
A. Expansion bus B. Width bus C. Long bus D. System bus
4. Which of the Boolean law states that a+b=b+a and ab+ba?
A. Associative B. Distributive C. Commutative D. Absorption
5. Which of the Boolean laws states that a+1=1 and a+0=a ? A. Identity B. Summation C. Idempotent D. Null
6. How many literals are present in Boolean expression $(a + b^1)(a + b + c)(b^1 + c^1)$ A. 2 B. 3 C. 6 D. 7
7. The gate that has it output to be true if all the inputs are true is __
A. NOT B. OR C. AND D. None of the above
8. Grouping of zeroes (0's) in a K-Map is meant for __ expression
A. POS B. SOP C. Neither POS or SOP D. Both POS and SOP
9. The expression (XY + XZ) is in ___ form. A. POS B. SOP C. Neither POS or SOP D. Both POS and SOP
10. __ is the main components of the computer system
A. Input/Output unit B. CPU C. Main memory D. All of the above
11. Which of the Boolean law states that (a+b)+c=a+(b+c) and a(bc)=(ab)c?
A. Associative B. Distributive C. Commutative D. Absorption
12. Computer address bus is__? A. Multidirectional B. Bidirectional C. Unidirectional D. None of the above
13. How many variables are there in Boolean Expression F=£(1,5,6,7,11,12,)? A. 5 B. 4 C. 3 D. 2
14. How many variables are there in Boolean expression $(a + b^1)(a+b+c)(b^1+c^1)$ A. 7 B. 5 C. 4 D. 3
15. How many prime implicants are there in Boolean Expression F=£(0,1,5,7)? A. 5 B. 4 C. 3 D. 2
16. Which of the Boolean law states that $a+a^1=1$ and $a*a^1=0$?
A. Involution B. Complement C. Commutative D. Adsorption
17. which of the Boolean Laws is good to use for converting POS expression to SOP expression?
A. Associative B. Commutative C. Distributive D. DeMorgan's
18. The expression (X+Y) (X+Z) is in ___ form A. POS B. SOP C. Neither POS or SOP D. Both POS and SOP
19. The gate that has it output to be true if one or all the inputs are true is __
A. NOT B. OR C. AND D. None of the above
20. How many Prime Implicants are there in Boolean Expression F=£(0,1,2,3,4,5,6,7,8,9,11,13,15)?
A. 5 B. 4 C. 3 D. 2
21. How many prime implicants are there in Boolean Expression F=£(0,1,2,4,5,7)? A. 5 B. 4 C. 3 D. 2
22. Which of the Boolean law states that a(b+c)=ab+ac and a+bc=ab+ac?
A. Associative B. Distributive C. Commutative D. Absorption
23. Three variable K-Map has __ number of possible forms A. 5 B. 4 C. 3 D. 2
24. How many prime implicants are there in Boolean Expression F=£(0,1,3,4,5,6,7,8,9,10,11,13)? A. 5 B. 4 C. 3 D. 2
25. Computer bus consists of __ wires. A. 0 or 1 B. 1 or less C. Exactly one D. One or more
26. How many prime implicants are there in Boolean Expression F=£(0,2,4,5,6,10)? A. 5 B. 4 C. 3 D. 2
27. Which of the Boolean laws states that a+a=a and a*a=a? A. Identity B. Summation C. Idempotent D. Null
28. Grouping of ones (1's) in a K-Map is meant for __ expression
A. POS B. SOP C. Neither POS or SOP D. Both POS and SOP
29. How many prime implicants are there in Boolean Expression F=£(2,4,5,6,7)? A. 5 B. 4 C. 3 D. 2
30. Which of the Boolean laws states that a+0=1 and a+1=a ? A. Identity B. Summation C. Idempotent D. Null
31. _ is a step by step procedure to solve a problem. A. Graph B. Table C. Algorithm D. None of the above
32. How many Prime Implicants are there in Boolean Expression F=£(1,2,3)? A. 5 B. 4 C. 3 D. 2
33. Which of the Boolean law states that $(a^1)^1=a$? A. Involution B. Complement C. Commutative D. Absorption
34. How many variables are there in Boolean Expression F=£(1,2,3)? A. 5 B. 4 C. 3 D. 2
35. RAM is usually call__ memory. A. Physical B. Logical C. Conceptual D. User
36. How many Prime Implicants are there in Boolean Expression F=£(0,3,4,5,7,11,13,15)? A. 5 B. 4 C. 3 D. 2 Ans: 4
37. What type of Boolean expression is $XY + X^1Y + X^1Z$? Ans: sop
38. Which of the following is not a Boolean law ? A. Identity B. Summation C. Idempotent D. Null
39. Four variable K-Map has __ number of possible forms. A. 5 B. 4 C. 3 D. 2
40. The gate that has it output to be true if all the inputs are true is __
A. NOT B. OR C. AND D. None of the above