FODE MCQ

1. Which number system has a base 16?
   A. Binary
   B. Decimal
   C. Octal
   D. Hexadecimal
2. Which is typically the longest?
   A. Bit
   B. Byte
   C. nibble
   D. Word
3. Any Signed negative binary number is recognized by its
   A. MSB
   B. LSB
   C. Intermediate
   D. None
4. The quantity of double word is
   A. 16 bits
   B. 4 bits
   C.32 bits
   D. 8 bits
5. The largest two digit decimal number is
   A. $(FE)_{16}$
   B. $(FD)_{16}$
   C. $(EF)_{16}$
   D. $(FF)_{16}$
6. $(1E2)_{16}$ to $()_{10}$ is
   A. 480
   B. 483
   C. 482
   D. 484
7. $(170)_{10}$ to $()_{16}$ is
   A. $(FD)_{16}$
   B. $(DF)_{16}$
   C. $(AA)_{16}$
   D. $(AF)_{16}$

8 $(417)_{10}$ to $()_8$ is
A. $(641)_8$
B. $(619)_8$
C. $(640)_8$
D. $(598)_8$

9 $(651.124)_8$ is to $()_{16}$
A. $(1A9.2A)_{16}$
B. $(1B0.10)_{16}$
C. $(1A8.A3)_{16}$
D. $(1B0.B0)_{16}$

10 $(0.345)_{10}$ to $()_8$ is
A. $(0.16050)_8$
B. $(0.26050)_8$
C. $(0.19450)_8$
D. $(0.24040)_8$

11 $(01011.1011)_2$ to $()_{10}$ is
A. $(11.6875)_{10}$
B. $(11.5874)_{10}$
C. $(10.9876)_{10}$
D. $(10.7893)_{10}$

12 How many bits are required to store one BCD digit?
A. 2 bits
B. 4 bits
C.16 bits
D. 8 bits

13 2's complement of $(0101)_2$ is
A. 1011
B. 1111
C. 1101
D. 1110

14 In 2's complement representation the number 11100101 represents the decimal number
A. +37
B.-31
C. + 27
D. -27

15 BCD code for $(423)_{10}$ is

A. 0100 0010 0011
B. 0010 0011 0100
C. 1000 0111 0011
D. 1100 1011 1000

16 10's complement of $(569)_{10}$ is
A. 430
B. 431
C. 432
D. 434

17 Excess-3 code for (65)10 is
A. (98)10
B. (96)10
C. (93)10
D. (97)10

18 In a Positive logic system, ON is represented by
A. Low
B. High
C. Intermediate
D. None

19 The Most used Logic system is
A. Positive
B. Negative
C. MSI
D. VLSI

20 The Most used Logic system is
A. Positive
B. Negative
C. MSI
D. VLSI

21 The Gray code for 0110 is
A. 0100
B. 0101
C. 1101
D. 1100

22 The Binary code for 1011 is
A. 1101
B. 0100

C. 01111
D. 0110

23 Binary Digit Means
A. Byte
B. Bid
C. None
D. Bit

24 $(1100)_2 + (111)_2$ is
A. 10011
B. 11001
C. 11011
D. 11000

25 $(11001)_2 - (1100)_2$ is
A. 01101
B. 11100
C. 11011
D. 11000

26 The Gray code for 1001 is
A.0100
B. 1110
C. 1101
D. 1100

27 The Binary code for 1011 is
A.0100
B. 1110
C. 1101
D. 1100

28 $(101011)_2 + (110011)_2$
A.010001
B. 111001
C. 110101
D. 101010

29 $(11101)_2 - (110011)_2$
A.010001
B. 111001
C. 110101
D. 101010

30 Radix of Decimal number is
A.2

B. 16
C. 8
D. 10

31 In Boolean algebra, the OR operation is performed by which of the given properties
A. Distributive
B. Associative
C. Commutative
D. All of these

32 De Morgan's Law states that
A. (A+B)' = A'*B
B. (AB)′ = A′+B′
C. (AB)′= A′B′
D. (AB)′=A′+B

33 The logical sum of two or more than two logical products is termed as
A. OR
B. POS
C. SOP
D. None

34 A K-map (Karnaugh map) is an abstract form of which diagram organized as a squares matrix.
A. Block Diagram
B.Venn Diagram
C. Square Diagram
D. Cycle Diagram

35 Suppose the output of an XNOR gate is 1. Which of the given input combination is correct?
A. A= 0, B'=1
B. A=1,B=1
C. A=0,B=0
D. A=1,B=0

36 The AND operation is equivalent to
A. Union
B. Intersection
C. Division
D. Subtraction

37 The OR operation is equivalent to
A. Union

B. Intersection
C. Division
D. Subtraction

38 Positive integers must be represented by
A. Signed Numbers
B. Unsigned Numbers
C. Both
D. None

39 In a multiplexer the output depends on its
A. Data inputs
B. Select inputs
C. Select outputs
D. Enable pin

40 Which Gate is known as Equality Detector?
A. XOR
B. XNOR
C. NAND
D. NOR

41 Which Gate is known as In equality Detector?
A. XOR
B. XNOR
C. NAND
D. NOR

42 AND,OR and NOT combined known as
A. AOI
B. Basic Gates
C. Derived Gates
D. A and B both

43 How many select lines are required for a 1-to-8 demultiplexer?
A. 1
B. 2
C. 3
D. 6

44 Bubbled AND gate is equivalent to
A. NOR
B. NAND
C. AND
D. OR

45 Which Gates are known as Universal Gates?
- A. NAND and NOR
- B. NAND and OR
- C. AND and OR
- D. NAND and AND

46 How many AND gates are required for a 1-to-8 multiplexer?
A. 2
B. 6
C. 8
D. 5

47 In 1-to-4 multiplexer, if C1 = 1 & C2 = 1, then the output will be _____
A.Y0
B.Y1
C. Y2
D.Y3

48 Most demultiplexers facilitate which type of conversion?
A. Decimal-to-hexadecimal
B. Single input, multiple outputs
C. AC to DC
D. Odd parity to even parity

49 The number of inputs in a half adder is?
A. 2
B. 3
C.5
D.6

50 Each box in k-map is known as
- A. Cell
- B. Square
- C. Value
- D. Quad

51 Why is a decoder used in digital electronics?
A. To convert non coded information into a binary coded form.
B. To convert coded information into a non-coded form.
C. It is used to divide address bus and data bus.
D. None of these

52 The Minterms for four variables
A. 8
B. 16

C. 2
D. 1

53 Output of 2 bit magnitude comparator is
- A. 3
- B. 4
- C. 2
- D. 1

54 Don't care condition can be considered as
- A. 0
- B. 1
- C. Either 0 or 1
- D. None

55 SOP works on
- A. Positive logic
- B. Negative Logic
- C. MSI
- D. VLSI

56 Which works on Negative logic?
- A. SOP
- B. POS
- C. MSI
- D. VLSI

57 The involution of A is equal to
A. A
B. A'
C. 1
D. 0

58 According to Boolean law: A + 1 =?
A. 1
B.A
C.0
D. A'

59 The expression for Absorption law is given by _____
A. A + AB = A
B.A + AB = B
C. AB + AA' = A
D. A + B = B + A

60 A (A + B) =?
A. AB

B.1
C.A+B
D.A

61 The boolean function A + BC is a reduced form of _____
A. AB + BC
B.(A + B)(A + C)
C.A'B + AB'C
D. (A + C)B

62 Simplify Y = AB' + (A' + B) C.
A. AB' + C
B. AB + AC
C. A'B + AC'
D.AB + A

63 1's complement can be easily obtained by using _____
A. Adder
B.Subtractor
C. Inverter
D. Comparator

64 Which one is used for logical manipulations?
A. 2's complement
B.9's complement
C. 1's complement
D. 10's complement

65 For arithmetic operations only
A.1's complement is used
B.2's complement
C.10's complement
D. 9's complement

66 The addition of +19 and +43 results as _____ in 2's complement system.
A.11001010
B.101011010
C.00101010
D.0111110

67 The expression Y= (A+B)(B+C)(C+A) shows the _____ operation.
a)AND
b) POS
c) SOP

d) NAND

68 There are _____ Minterms for 3 variables (a, b, c).
A.0
B. 2
C. 8
D.1

69 If the number of n selected input lines is equal to 2^m then it requires ____ select lines.
A. 2
B. m
C. N
D. 2^n

70 How many NOT gates are required for the construction of a 4-to-1 multiplexer?
A. 3
B. 4
C. 2
D. 5

71 IC means
A. Integrated Circuits
B. Information Circuit
C. Intelligent Circuit
D. Inter actual Circuit

72 SSI means
A. Short Scale Integration
B. Small Scale Integration
C. Sharp Scale Integration
D. System Scale Integration

73 Output depends on only present input is known as
A. Combinational Circuit
B. Sequential Circuit
C. VLSI
D. MSI

74 How is an encoder different from a decoder?
A. The output of an encoder is a binary code for 1-of-N input
B. The output of a decoder is a binary code for 1-of-N input
C. The output of an encoder is a binary code for N-of-1 output
D. The output of a decoder is a binary code for N-of-1

output

75 How many OR gates are required for an octal-to-binary encoder?
A.3
B.2
C. 8
D. 10

76 In VLSI V means
A. Very
B. Vary
C. Varied
D. Varying

77 LSB means
A. Least Significant Bit
B. Large Significant Bit
C. Less Significant Bit
D. Law Significant Bit

78 Which one is not combinational circuit?
A. Half Adder
B. Full adder
C. Half Subtractor
D. Register

79 Which one is not Sequential circuit?
A. Flip flop
B. Counters
C. Registers
D. Magnitude comparator

80 Memory Element is needed in
A. Combinational Circuit
B. Sequential Circuit
C. VLSI
D. MSI

81 The word demultiplex means _____
A. One into many
B. Many into one
C. Distributor
D. One into many as well as Distributor

82 How many outputs are present in a BCD decoder?
A. 4
B. 5

C.15
D.10

83 In Boolean bubble means
- A. Negative
- B. OR
- C. AND
- D. SUM

84 How many truth table entries are necessary for a four-input circuit?
- A. 4
- B. 8
- C. 10
- D. 16

85 The AND function can be used to _____ and the OR function can be used to _____
- A. Enable, disable
- B. Disable, enable
- C. Synchronize, energize
- D. Detect, invert

86 The basic logic gate whose output is the complement of the input is the
A.OR gate
B. AND gate
C. INVERTER gate
D.XOR gate

87 What is the addition of the binary numbers 11011011010 and 010100101?
A.0111001000
B. 1100110110
C. 11101111111
D.10011010011

88 Perform binary addition: 101101 + 011011 =?
A.011010
B. 1010100
C. 101110
D.1001000

89 Perform binary subtraction: 101111 – 010101 =?
A.100100
B. 010101

C. 011010
D.011001

90 Binary subtraction of 100101 – 011110 is?
A.000111
B.111000
C. 010101
D.101010

91 For 8-bit input encoder how many combinations are possible?
A.8
B. 2^8
C. 4
D. 2^4

92 Convert binary to octal: (110110001010)2 =?
A. (5512)8
B. (6612)8
C. (4532)8
D.(6745)8

93 The decimal equivalent of the binary number (1011.011)2 is
A. (11.375)10
B. (10.123)10
C. (11.175)10
D. (9.23)10

94 How many entries will be in the truth table of a 3 input NAND gate?
A. 3
B. 6
C. 8
D. 9

95 SSI has how many components?
A.100
B. less than 100
C.100
D. 1000

96 SSI has how many gates?
A.10
B.100
C.1000
D.10000

97 The system which has more than 300000 components on the

chip
A. VLSI
B. VVLSI
C. LSI
D. MSI

98 The system has more than 100 gates
A.LSI
B.MSI
C.VLSI
D.SSI

99 Basic Building block of Digital Electronics is
A. Gates
B. Flip flop
C. IC
D. Transistor

100 IC needs _____Voltage
A. Low
B. High
C. Medium
D. Very high