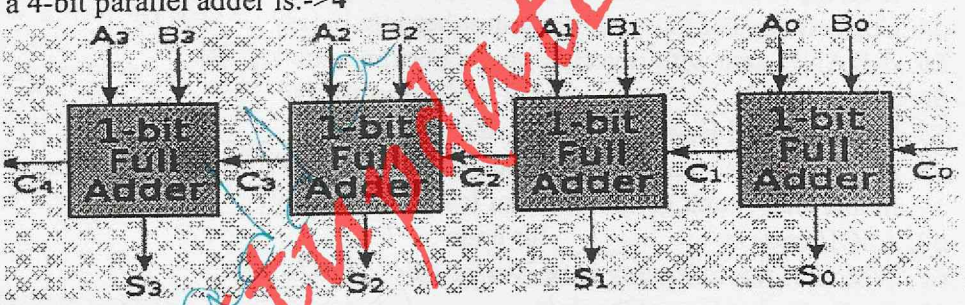
2nd year 2nd sem 1st mid R10

STLD

1. The difference bit output of a half-subtractor is the same as :->**difference bit output of a full-subtractor**
2. Which of the following is known as half-adder?:->**XOR gate**
3. How many inputs and outputs does a full subtractor circuit have?:->**three inputs, two outputs**
4. How many inputs and outputs does a full adder have?:->**three inputs, two outputs**
5. A combinational circuit:->**never contains memory elements**
6. In a combinational circuit the outputs at any instant of time depend:->**only on the inputs present at that instant of time**
7. The half-adder carry equation is:->**A.B'**
8. The half-adder sum is given by:->**XOR gate**
9. The half adder has how many inputs and outputs?:->**2,2**
10. The combinational circuits depends on:->**Present inputs only**
11. The full adder can perform:->**3 bit addition with carry**
12. The number of full adders in a 4-bit parallel adder is:->**4**



13. Which type of adder is this? :->**4-bit ripple carry adder**
14. The carry generated in binary subtraction with 1's or 2's complement method is called :->**End around-carry method**
15. The number of full-adders in 4-bit parallel adder is:->4
16. EX-3 adder requires how many number of full adders :->2
17. The carry look-ahead adder calculates one or more carry bits, which reduces the wait time to calculate the result of the larger value bits.:->**before the sum**
18. Which adder each full adder inputs a C_{in}, which is the C_{out} of the previous adder? :->**ripple carry adder**
19. BCD subtractor requires how many parallel adders?:->4
20. A full subtractor can be realized by :->**two half subtractors, one OR gate**
21. BCD adder requires how many number of full adders?:->2
22. A full adder can be realized by:->**two-half-adder, one OR gates**
23. EX-3 subtractor can be implemented by using how many numbers of parallel adders:->2
24. The carry expression for a full adder is:->**xy+yz+xz**
25. A full subtractor can be realized by :->**two- half subtractors, one OR gate**
26. BCD adder requires how many number of full adders. :->2
27. The number of full adders required to add two 4-bit data in a Serial adder :->1
28. A full adder can be realized by :->**two- half -adder, one OR gates**
29. The number of NAND gates is required to realize a half-subtractor:->5
30. Identify the borrow expression for full-subtractor circuit:->**X'(Y+Z)+YZ**
31. The minimum number of NAND gates are required to realize the OR gate are_____ :->3
32. A®B = _____ :-> **A'B'+AB**
33. The output expression for NOR gate is _____ :->**(A+B) '**
34. The given maxterm is A+B+C is equivalent binary number is _____ :->**000**
35. The minimum number of NAND gates is required to implement the function F= (x ' +y ')(z+w) :->4
36. The simplified expression for A(A+B) is _____ :->**A**
37. How many number of outputs are available for logic gate? :->**1**
38. An XOR gate with 6 terms contains _____ number of minterms :->**32**

39. The operation which is commutative but not associative is _____ :->**NAND**
40. In Cyclic Redundancy Check if the number of information bits are ' n ', then the length of the divisor is _____ :->**n+1**
41. Vertical redundancy check is also called as _____ :->**Parity check**
42. Error correcting code can perform the operation is _____ :->**Both**
43. Convert the 11001010 binary number into gray code :->**10101111**
44. Boolean algebra does not have _____ operations :->**All of the above**
45. The positions of redundancy bits in Hamming code is _____ :->**powers of 2**
46. AB+A'BC+BC is an example for _____ :->**SOP**
47. (x ') ' = :->**x**
48. Simplify the expression A+AB+ABC+ABCD+ABCDE :->**A**
49. An example of canonical SOP is _____ :->**AB'C+A'BC**
50. The duel of the given function can be obtained by _____ :->**Both a & b**
51. X.1=1.X =X is _____ Law :->**Union**
52. NOT gate consists _____ no. of inputs :->**1**
53. If an input A is given to an inverter, the output will be _____ :->**A '**
54. Convert the 101101 gray code number into binary :->**110110**
55. A NAND gate with inverted inputs performs the logical _____ function :->**OR**
56. A.B = B.A is _____ Law :->**Commutative**
57. In two valued Boolean algebra, if x=1, then x.x= _____ :->**1**
58. For the inputs a and b, the output expression for AND gate is _____ :->**a.b**
59. In a K-map, each given minterm is represented by _____ :->**1**
60. ASCII code is _____ bit code :->**7**
61. Which of the following is universal gate? :->**NAND**
62. Cyclic Redundancy Check is _____ type of code :->**Error detecting**
63. EBCDIC stands for _____ :->**Extended Binary Coded Decimal Interchange**
64. The number of cells in a 4-variable K-map is _____ :->**16**
65. In the Hamming code for each group of ' m ' information digits, K parity checking digits are added with _____ condition :->$2^K \geq m+K+1$
66. Gray code is _____ :->**Non weighted code**
67. The equivalent gray number for the binary number is _____ :->**1101**
68. The don' t care in K-map covered in a looping, then its value is treated as _____ :->**1**
69. The function and its duel are same then the function is called as _____ :->**Self-duel**
70. (a.b)' =a'+b' is _____ theorem :->**de Morgan' s**
71. (x+y)' = :->**X'.y'**
72. The MSB of a signed binary number indicates its :->**sign**
73. Gray code is :->**non-weighted**
74. The process of subtraction gets converted into that of addition by using :->**2' s complement method**
75. The minimum distance of _____ is required for a code to be error correcting code:->**3**
76. 2' complement of a 2' s complement is :->**same number itself**
77. The number of bits required to represent 25 in BCD is :->**8**
78. In the Hamming code for each group of ' M ' in formation digits , K parity checking digits are added with a condition :->**$2^k \geq M + K + 1$**
79. Cyclic codes are useful in : :->**continuously varying digital signals representation**
80. Which of the following Boolean algebra rules is correct ? :->**(A +B) (A + C) = AC + B C**
81. The Boolean expression (XYZ + YZ − XZ) after simplification :->**Y**
82. The minimum distance required for a code to be a error detecting code is :->**2**
83. The parity of 01110010 is :->**even**
84. The NAND can function as NOT gate if :->**inputs are connected together**
85. Which of the following gates is known as coincidence detector? :->**AND gate**
86. AB + A + 1= :->**1**
87. (a+b)' =a'b' and (ab)' =a'+b'. This theorem is called :->**Demorgan's theorem**
88. Which of the following code is used in K - map for representing the min terms? :->**Gray code**
89. The given max term is A+B+C, its equivalent Binary representation is :->**000**

90. a+b=1, ab=0, then:->**a=b' and b=a'**
91. a+b = a+c and ab=ac, then :->**b=c**
92. aa'= :->**0**
93. a+a':->**1**
94. If a' =b; then (a')'=:->**b'**
95. a+a= :->**a**
96. The given max term is A+B+C, its equivalent Binary representation is :->**101**
97. Which of the following code issued in K - map for representing them in terms? :->**Gray code**
98. In which of the following gates, the output is 0 If and only if at least one input is 1? :->**NOR**
99. Identify the universal gate from the following gates :->**NAND**
100. a+1=:->**1**
101. a.0=:->**0**
102. Express (1111 1011) 2421code into decimal form :->**954**
103. Express 970 into excess-3 code :->**1100 1010 0011**
104. Convert 0110 1011 1100 0111 excess-3 code into decimal :->**3894**
105. Convert gray code1110011 into binary :->**1011101**
106. Convert 1011101.1011 into hexadecimal :->**5D.B**
107. Convert $(FFF)_{16}$ into decimal equivalent :->**4095**
108. Convert $(2BD)_{16}$ into octal equivalent :->**1275**
109. Subtract 438 from 473 using 10's complement method :->**359**
110. Encode the 7-bit even parity hamming code 1110000 into binary code :->**1000**
111. Perform 111111/1001 :->**111**
112. 1' s complement of 111001101 :->**000110010**
113. Convert 434.45 into floating point decimal notation :->**$43445X10^{-2}$**
114. Multiply 1011 and 111 :->**1001 101**
115. Convert 0.00379 into floating point decimal notation :->**$379X10^{-5}$**
116. Perform 10110.1101/11.1 :->**111.00011**
117. Subtract 15 from 39using 9' s complement method :->7