Question No : 1 of 26 Marks: 1 (Budgeted Time 1 Min)

The range of Excess-8 code is from _____ to _____

Answer (Please select your correct option)

- +7 to -8 correct
- +8 to -7
- +9 to -8
- -9 to +8

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Question No : 2 of 26 Marks: 1 (Budgeted Time 1 Min)

The decimal "17" in BCD will be represented as _____

Answer (Please select your correct option)

- 11101
- 11011
- 10111 correct
- 11110

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Question No : 3 of 26 Marks: 1 (Budgeted Time 1 Min)

The four outputs of two 4-input multiplexers, connected to form a 16-input multiplexer, are connected together through a 4-input _____ gate

Answer (Please select your correct option)

- AND
- OR

correct

- NAND
- XOR

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Question No : 4 of 26 Marks: 1 (Budgeted Time 1 Min)

A standard interface for programming the In-System PLD consists of _____.

Answer (Please select your correct option)

- 2-wire
- 4-wire

correct

- 8-wire
- 16-wire

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Question No : 5 of 26 Marks: 1 (Budgeted Time 1 Min)

_____ Dual, 4-input multiplexer can be connected to form a 16-input multiplexer.

Answer (Please select your correct option)

- 2
- 3
- 4 correct
- 5

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Question No : 6 of 26 Marks: 1 (Budgeted Time 1 Min)

S-R latch can be implemented by using _____ gates

Answer (Please select your correct option)

- AND, OR

correct

- NAND, NOR
- NAND, XOR
- NOT, XOR

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Question No : 7 of 26 Marks: 1 (Budgeted Time 1 Min)

A product term is 0 when_____.

Answer (Please select your correct option)

- Any of the literals is 1
- At least two literals are 1
- All the literals are 1
- Any of the literal is 0

correct

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Question No : 8 of 26 Marks: 1 (Budgeted Time 1 Min)

What will be the output of a 3-input NAND gate for the input values: A=1, B=0, C=1

Answer (Please select your correct option)

- Zero

correct

- One
- Undefined
- No output, as input is invalid

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Question No : 9 of 26 Marks: 1 (Budgeted Time 1 Min)

_____ is not a valid hexadecimal number.

Answer (Please select your correct option)

- 1234
- ABCD
- 1001
- DEHF

correct

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Question No : 10 of 26 Marks: 1 (Budgeted Time 1 Min)

2's complement of any binary number can be calculated by

Answer (Please select your correct option)

- adding 1 to 1's complement

  correct
- subtracting 1 from 1's complement.
- calculating 1's complement and inverting Most significant bit
- adding 1's complement twice

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Question No : 11 of 26 Marks: 1 (Budgeted Time 1 Min)

A BCD to 7-Segment decoder has _____ inputs and _____ outputs.

Answer (Please select your correct option)

- 3, 7
- 4, 7 correct
- 7, 3
- 7, 4

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Question No : 12 of 26 Marks: 1 (Budgeted Time 1 Min)

Which of the following simplification method is intended to be used for Boolean expressions having more than four variables?

Answer (Please select your correct option)

- Boolean Algebra and rules
- Karnauph Map
- Quine-McCluskey

correct

- Demorgan's Theorem

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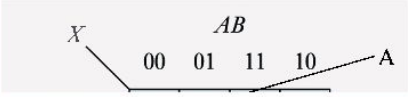
Question No : 13 of 26 Marks: 1 (Budgeted Time 1 Min)

In the following Karnaugh map, which group has "legal grouping" ?



Answer (Please select your correct option)

- A
- B
- C

correct

- D

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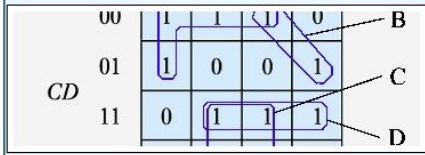
Question No : 13 of 26 Marks: 1 (Budgeted Time 1 Min)



Answer (Please select your correct option)

A

B

C

D

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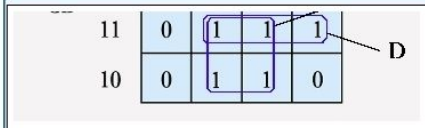
Question No : 13 of 26 Marks: 1 (Budgeted Time 1 Min)



Answer (Please select your correct option)

A

B

C

D

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Question No : 14 of 26 Marks: 1 (Budgeted Time 1 Min)

What are the values of sum and carry out when two 4-bit binary numbers (1011 and 1111) are applied to a 4-bit parallel adder and carry input is 1.

Answer (Please select your correct option)

- $\Sigma_4\Sigma_3\Sigma_2\Sigma_1 = 0111$, $C_{out} = 0$
- $\Sigma_4\Sigma_3\Sigma_2\Sigma_1 = 1111$, $C_{out} = 1$
- $\Sigma_4\Sigma_3\Sigma_2\Sigma_1 = 1011$, $C_{out} = 1$
- $\Sigma_4\Sigma_3\Sigma_2\Sigma_1 = 1100$, $C_{out} = 1$

Question No : 15 of 26 Marks: 1 (Budgeted Time 1 Min)

A particular half-adder has _____ inputs and _____ output(s).

Answer (Please select your correct option)

- 3, 1
- 3, 2
- 2, 1
- 2, 2

correct

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Question No : 16 of 26 Marks: 1 (Budgeted Time 1 Min)

TTL based devices work with a DC supply of ____ Volts

Answer (Please select your correct option)

- +10
- +5 correct
- +3
- 3.3

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Question No : 17 of 26 Marks: 1 (Budgeted Time 1 Min)

In CMOS 5 Volt series, Input voltage for Logic high signal (V_{IH}) is in the range of _____ volts.

Answer (Please select your correct option)

- 3.5 to 5 correct
- 4.5 to 5
- 0 to 5
- 0 to 3.5

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Question No : 18 of 26 Marks: 1 (Budgeted Time 1 Min)

A multiplexer circuit has _____ input(s) and _____ output(s).

Answer (Please select your correct option)

- Single, single
- Single, multiple
- Multiple, single
- Multiple, multiple

correct

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Question No : 19 of 26 Marks: 1 (Budgeted Time 1 Min)

The binary values for the standard SOP expression, $ABC\bar{D} + \bar{A}BC\bar{D} + \bar{A}\bar{B}\bar{C}D$ are _____

Answer (Please select your correct option)

- 1110 + 0110 + 0001

correct

- 1011 + 1111 + 1011
- 0001 + 1001 + 1110
- 1010 + 1110 + 0101

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Question No : 20 of 26 Marks: 1 (Budgeted Time 1 Min)

Determine the binary values of the variables for the following standard POS expression.

$(A + \overline{B} + C)(\overline{A} + B + \overline{C})$

Answer (Please select your correct option)

- (1 + 0 + 1)(0 + 1 + 0)

correct

- (0 + 1 + 0)(1 + 0 + 1
- (1 + 0 + 0)(0 + 0 +1)
- (0 + 1 + 0)(1 + 1 + 0)

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Question No : 21 of 26 Marks: 2 (Budgeted Time 4 Min)

How many possible outputs does a decoder of 3 inputs contain?

Answer (Please click here to Add Answer)

Question No : 22 of 26 Marks: 2 (Budgeted Time 4 Min)

How can we use 3-to-8 decoder to implement SOP expressions?

Answer (Please click here to Add Answer)

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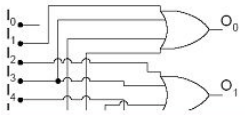
Question No : 23 of 26 Marks: 3 (Budgeted Time 6 Min)

For a two bit comparator circuit, specify all the inputs for which A > B is set to 1.

Answer (Please click here to Add Answer)

Question No : 24 of 26 Marks: 3 (Budgeted Time 6 Min)

Identify the following circuit that is which combinational circuit is being represented by this diagram?



Answer (Please click here to Add Answer)

Normal Arial 12 100%

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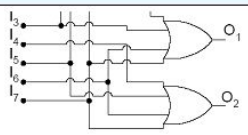
Question No : 24 of 26 Marks: 3 (Budgeted Time 6 Min)



Answer (Please click here to Add Answer)

100%

Normal Arial 12

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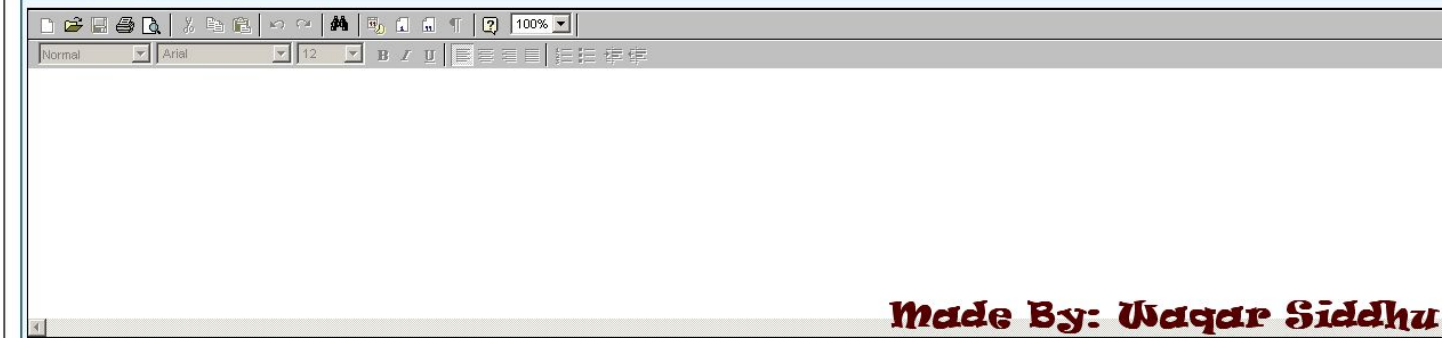
Question No : 25 of 26 Marks: 5 (Budgeted Time 10 Min)

Consider a logical circuit for 4-bit binary number. The circuit gives output 0 for adjacent 0s in a binary number. Draw the karnauph map of such circuit and derive simplified POS expression.

Answer (Please click here to Add Answer)



Question No : 26 of 26 Marks: 5 (Budgeted Time 10 Min)

Multiplexers can be used as a "Logic Function Generator". Draw only circuit diagram and function table based on three variables.

Answer (Please click here to Add Answer)