

Question No : 1 of 26

Marks: 1 (Budgeted Time 1 Min)

$(A+B).(A+C) =$  \_\_\_\_\_

Answer ( Please select your correct option )

☐ B+C

☒ A+BC

correct

☐ AB+C

☐ AC+B

**Made By: Waqar Siddhu**

Question No : 2 of 26

Marks: 1 (Budgeted Time 1 Min)

Excess-8 code assigns \_\_\_\_\_ to "-8"

Answer ( Please select your correct option )

☐ 1110

☐ 1100

☐ 1000

☐ 0000

correct

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Question No : 3 of 26

Marks: 1 (Budgeted Time 1 Min)

The output of the expression  $F = A.B.C$  will be Logic \_\_\_\_\_ when  $A=1$ ,  $B=0$ ,  $C=1$ .

Answer ( Please select your correct option )

☐ Undefined

☐ One

☐ Zero

correct

☐ No Output as input is invalid.

**Made By: Waqar Sidhu**

Question No : 4 of 26

Marks: 1 (Budgeted Time 1 Min)

The cell marked 6 in 4-variable K-Map represent minterm 6 or the maxterm 6 having the following binary value of variables A, B, C and D.

Answer ( Please select your correct option )

☐ A=1, B=1, C=0, D=0

☐ A=0, B=1, C=1, D=0

correct

☐ A=0, B=0, C=1, D=1

☐ A=1, B=0, C=0, D=1

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Question No : 5 of 26

Marks: 1 (Budgeted Time 1 Min)

A comparator circuit has multiple inputs and \_\_\_\_\_ outputs

Answer ( Please select your correct option )

☐ 2

☐ 3

correct

☐ 4

☐ 7

**Made By: Waqar Siddhu**

Question No : 6 of 26

Marks: 1 (Budgeted Time 1 Min)

The output  $A < B$  is set to 1 when the input combinations is \_\_\_\_\_

Answer ( Please select your correct option )

☐ A=10, B=01

☐ A=11, B=01

☐ A=01, B=01

☐ A=01, B=10

correct

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Question No : 7 of 26

Marks: 1 (Budgeted Time 1 Min)

The \_\_\_\_\_ Encoder is used as a keypad encoder.

Answer ( Please select your correct option )

- ☐ 2-to-8 encoder
- ☐ 4-to-16 encoder
- ☐ BCD-to-Decimal
- ☐ Decimal-to-BCD Priority

correct

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Question No : 8 of 26

Marks: 1 (Budgeted Time 1 Min)

Using multiplexer as parallel to serial converter requires \_\_\_\_\_ connected to the multiplexer

Answer ( Please select your correct option )

☐ A parallel to serial converter circuit

correct

☐ A counter circuit

☐ A BCD to Decimal decoder

☐ A 2-to-8 bit decoder

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Question No : 9 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

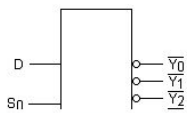
☐ XOR

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Question No : 10 of 26

Marks: 1 (Budgeted Time 1 Min)

The device shown here is most likely a \_\_\_\_\_



Answer ( Please select your correct option )

☐ Comparator

☐ Multiplexer

correct

☐ Demultiplexer

☐ Parity generator

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Question No : 11 of 26

Marks: 1 (Budgeted Time 1 Min)

GAL is an acronym for \_\_\_\_\_.

Answer ( Please select your correct option )

☐ Generic Analysis Logic

☐ Giant Array Logic

☐ General Array Logic

☐ Generic Array Logic

correct

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Question No : 12 of 26

Marks: 1 (Budgeted Time 1 Min)

In the binary number "10011" the weight of the most significant digit is \_\_\_\_

Answer ( Please select your correct option )

☐  $2^4$  (2 raise to power 4)

correct

☐  $2^3$  (2 raise to power 3)

☐  $2^0$  (2 raise to power 0)

☐  $2^1$  (2 raise to power 1)

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Question No : 13 of 26

Marks: 1 (Budgeted Time 1 Min)

The output of the expression  $F=A+B+C$  will be Logic \_\_\_\_\_ when  $A=0$ ,  $B=1$ ,  $C=1$ .

Answer ( Please select your correct option )

☐ Undefined

☐ One

☐ Zero

☐ 10 (binary)

correct

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Question No : 14 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

☐ Karnaugh Map

☐ Quine-McCluskey

correct

☐ Demorgan's Theorem

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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)

A quantity having continuous values is a/an \_\_\_\_\_ quantity.

Answer ( Please select your correct option )

☐ digital

☐ binary

☐ analog

☐ natural

correct

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Question No : 17 of 26

Marks: 1 (Budgeted Time 1 Min)

Which one of the following expressions is an example of Commutative Law for Multiplication?

Answer ( Please select your correct option )

☐  $AB+C = A+BC$

☐  $A(B+C) = B(A+C)$

☐  $AB=BA$

correct

☐  $A+B=B+A$

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Question No : 18 of 26

Marks: 1 (Budgeted Time 1 Min)

When four 1's are taken as a group on a Karnaugh map, the number of variables eliminated from the output expression is/are \_\_\_\_\_

Answer ( Please select your correct option )

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

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Question No : 19 of 26

Marks: 1 (Budgeted Time 1 Min)

Identify the Boolean expression that is in standard POS form.

Answer ( Please select your correct option )

☐  $(A + \bar{B})(\bar{A} + B + \bar{C})$

correct

☐  $\bar{A}\bar{B}C + A\bar{B}C$

☐  $(A + \bar{B} + \bar{C})(A + B + C)$

☐  $(A + B)(A + C)$

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Question No : 20 of 26

Marks: 1 (Budgeted Time 1 Min)

Simplifying POS (Product of sum) expression requires the grouping of \_\_\_\_\_

Answer ( Please select your correct option )

☐ 0s

correct

☐ 1s

☐ Don't care

☐ Both 0s and 1s

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Question No : 21 of 26

Marks: 2 (Budgeted Time 4 Min)

How many input and output bits do a Half-Adder contain?

Answer ( [Please click here to Add Answer](#) )



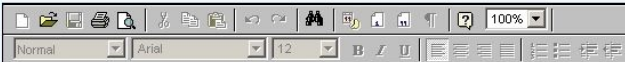
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Question No : 22 of 26

Marks: 2 (Budgeted Time 4 Min)

Draw the Truth-Table of NAND based S-R Latch.

Answer ( [Please click here to Add Answer](#) )



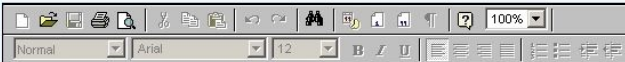
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Question No : 23 of 26

Marks: 3 (Budgeted Time 6 Min)

Draw the block diagram of 4-bit BCD Adder.

Answer ( [Please click here to Add Answer](#) )



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Question No : 24 of 26

Marks: 3 (Budgeted Time 6 Min)

Tri-state buffer control input can be connected in four different ways. Name any three of them.

Answer ( [Please click here to Add Answer](#) )

Normal Arial 12 B I U

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Question No : 25 of 26

Marks: 5 (Budgeted Time 10 Min)

Simplify the following Boolean expressions, using Boolean Algebraic rules

- $(A+B)(A+B')$
- $(A+B)'(A'+B')'$

Answer ( [Please click here to Add Answer](#) )



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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](#) )



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