

Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

Caveman number system is Base _____ number system

Answer (Please select your correct option)

VuAnswers.com

2

5

10

16

correct

Made by: Waqar Siddhu

Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

110 / 10 = _____

Note: both values are in binary

Answer (Please select your correct option)

VuAnswers.com

11

correct

10

111

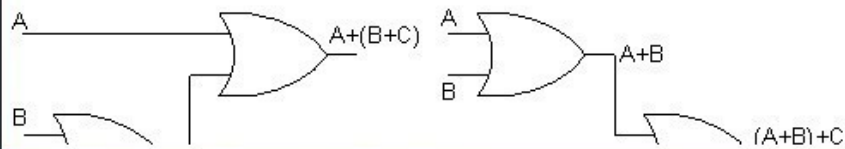
101

Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

The circuit diagram below explains the _____



Answer (Please select your correct option)

VuAnswers.com

Associative Law for Multiplication

Commutative Law for Addition

Commutative Law for Multiplication

Associative Law for Addition

correct

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

$$A + \bar{A}B = \underline{\hspace{2cm}}$$

Answer (Please select your correct option)

VuAnswers.com

- A
- B
- A.B
- A+B

correct

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

$\bar{A}B + \bar{A}B\bar{C} + AC$ is an example of _____

Answer (Please select your correct option)

VuAnswers.com

Product of sum form

Sum of product form

correct

Demorgans law

Associative law

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

A standard POS form has _____ terms that have all the variables in the domain of the expression.

Answer (Please select your correct option)

VuAnswers.com

- Sum
- Product
- Min
- Composite

correct

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

74HC163 has two enable input pins which are _____ and _____

Answer (Please select your correct option)

VuAnswers.com

ENP, ENT

correct

ENI, ENC

ENP, ENC

ENT, ENI

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

Given the state diagram of an up/down counter, we can find _____

Answer (Please select your correct option)

VuAnswers.com

- The next state of a given present state
- The previous state of a given present state
- Both the next and previous states of a given state
- The state diagram shows only the inputs/outputs of a given states

correct

Made by: Waqar Siddhu

Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

A multiplexer with a register circuit converts _____

Answer (Please select your correct option)

VuAnswers.com

Serial data to parallel

Parallel data to serial

Serial data to serial

Parallel data to parallel

correct

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

What will be output state when $J = 1$, $K = 0$ and CLR input is active?

Answer (Please select your correct option)

VuAnswers.com

- Q = 1
- Q = 0
- Retains previous output state
- Toggle output

correct

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

When $PRE' = 0$ and $CLR' = 1$, $Q_t = 0$ then $Q(t+1)$ will be _____

Answer (Please select your correct option)

VuAnswers.com

- Output of flip-flop will be set (Logic 1)
- Output of flip-flop will be reset (Logic 0)
- Output of flip-flop will be invalid
- Flip-flop will change output on Clock transition

correct

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

Compared to analog systems, digital systems _____.

Answer (Please select your correct option)

VuAnswers.com

- are less prone to noise
- can represent an infinite number of values
- can handle much higher power
- occupy large space

correct

not sure

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

When one 1 is 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)

VuAnswers.com

0



1



2



3



correct

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

Determine the values of A , B , C , and D for the sum term $\bar{A} + B + \bar{C} + D$

Answer (Please select your correct option)

VuAnswers.com

A = 1, B = 0, C = 0, D = 0

A = 1, B = 0, C = 1, D = 0

correct

A = 0, B = 1, C = 0, D = 1

A = 1, B = 0, C = 1, D = 1

Made by: Waqar Siddhu

Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

Determine the values of A , B , C , and D for the product term $\bar{A}B\bar{C}D$

Answer (Please select your correct option)

VuAnswers.com

A = 0, B = 1, C = 0, D = 1

correct

A = 1, B = 0, C = 1, D = 0

A = 1, B = 1, C = 1, D = 1

A = 0, B = 0, C = 1, D = 0

Made by: Waqar Siddhu

Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

A transparent mode means _____

Answer (Please select your correct option)

VuAnswers.com

- Input Hold time is zero (no need to maintain input after clock transition)
- The changes in the data at the inputs of the latch are seen at the output
- The changes in the data at the inputs of the latch are not seen at the output
- Propagation Delay is zero (Output is immediately changed when clock signal is applied)

correct

Made by: Waqar Siddhu

Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

The design and implementation of synchronous counters start from _____

Answer (Please select your correct option)

VuAnswers.com

Truth table

K-map

State table

State diagram

correct

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit whose output depends on the current state and the input is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

Mealy Machine

Counter

Flip Flop

correct

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

The best state assignment tends to _____.

Answer (Please select your correct option)

VuAnswers.com

Maximizes the number of state variables that don't change in a group of related states

correct

Minimizes the number of state variables that don't change in a group of related states

Minimizes the equivalent states

Maximizes the equivalent states

Made by: Waqar Siddhu

Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the Q output of the last flip-flop of the shift register is connected to the data input of the first flip-flop of the shift register.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

Invalid state of NOR based SR latch occurs when _____

Answer (Please select your correct option)

VuAnswers.com

S=0, R=0

S=0, R=1

S=1, R=0

S=1, R=1

correct

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

The operation of J-K flip-flop is similar to that of the SR flip-flop except that the J-K flip-flop _____

Answer (Please select your correct option)

VuAnswers.com

- Doesn't have an invalid state
- Sets to clear when both $J = 0$ and $K = 0$
- It does not show transition on change in pulse
- It does not accept asynchronous inputs

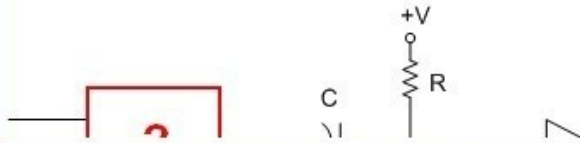
correct

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Following is the circuit diagram of mono-stable device. Which gate will be replaced by the red colored rectangle in the circuit?



Answer (Please select your correct option)

VuAnswers.com

AND

XNOR

correct

NAND

NOR

Made by: Waqar Siddhu

Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

A flip-flop is connected to +5 volts and it draws 5 mA of current during its operation, the power dissipation of the flip-flop is _____

Answer (Please select your correct option)

VuAnswers.com

10 mW



25 mW



correct

64 mW



84 mW



Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

RCO Stands for _____

Answer (Please select your correct option)

VuAnswers.com

Reconfiguration Counter Output

Reconfiguration Clock Output

Ripple Counter Output

Ripple Clock Output

correct

Made by: Waqar Siddhu

Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit, whose output is determined by the current state only is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

correct

Mealy Machine

Counter

Flip Flop

Made by: Waqar Siddhu

Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

In asynchronous transmission when the transmission line is idle, _____

Answer (Please select your correct option)

VuAnswers.com

- It is set to logic low
- It is set to logic high
- Remains in previous state
- State of transmission line is not used to start transmission

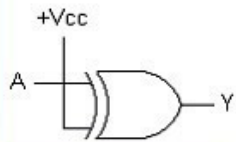
correct

Made by: Waqar Siddhu

Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

0

A

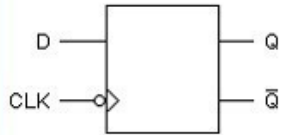
\bar{A}

correct

Made by: Waqar Siddhu

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)



Which of the following statement is true regarding above block diagram ?

Answer (Please select your correct option)

VuAnswers.com

- Triggering takes place on the negative-going edge of the CLK pulse
- Triggering takes place on the positive-going edge of the CLK pulse
- Triggering can take place anytime during the LOW level of the CLK waveform
- Triggering can take place anytime during the LOW level of the CLK waveform

correct

Made by: Waqar Siddhu

Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not characteristic of a shift register?

Answer (Please select your correct option)

VuAnswers.com

Serial in/parallel in

correct

Serial in/parallel out

Parallel in/serial out

Parallel in/parallel out

Made by: Waqar Siddhu

Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

A bidirectional 4-bit shift register is storing the nibble 1110. Its RIGHT/LEFT input is LOW. The nibble 0111 is waiting to be entered on the serial data-input line. After two clock pulses, the shift register is storing _____.

Answer (Please select your correct option)

VuAnswers.com

1110

0111

1000

1001

correct

Made by: Waqar Siddhu

Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit correct

Nibble

Byte

Word

Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

The high density FLASH memory cell is implemented using _____

Answer (Please select your correct option)

VuAnswers.com

- 1 floating-gate MOS transistor
- 2 floating-gate MOS transistors
- 4 floating-gate MOS transistors
- 6 floating-gate MOS transistors

correct

Made by: Waqar Siddhu

Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

FIFO is an acronym for _____

Answer (Please select your correct option)

VuAnswers.com

First In, First Out

correct

Fly in, Fly Out

Fast in, Fast Out

None of given options

Made by: Waqar Siddhu

Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

In order to synchronize two devices that consume and produce data at different rates, we can use _____

Answer (Please select your correct option)

VuAnswers.com

- Read Only Memory
- First In First Out Memory
- Flash Memory
- Fast Page Access Mode Memory

correct

Made by: Waqar Siddhu

Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

Stack is a _____

Answer (Please select your correct option)

VuAnswers.com

Bust Flash Memory

FIFO memory

LIFO memory

Flash Memory

correct

Made by: Waqar Siddhu

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

The voltage gain of the Inverting Amplifier is given by the relation _____

Answer (Please select your correct option)

VuAnswers.com

$V_{out} / V_{in} = - R_f / R_i$

correct

$V_{out} / R_f = - V_{in} / R_i$

$R_f / V_{in} = - R_i / V_{out}$

$R_f / V_{in} = R_i / V_{out}$

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

The process of converting the analogue signal into a digital representation (code) is known as _____

Answer (Please select your correct option)

VuAnswers.com

Strobing

Amplification

Quantization

Digitization

correct

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

A hold action occurs :

Answer (Please select your correct option)

VuAnswers.com

After the analog-to-digital conversion

During each sample

Immediately after a sample

Before each sample

correct

Made by: Waqar Siddhu

Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

According to the sampling theorem, the sampling frequency should be :

Answer (Please select your correct option)

VuAnswers.com

- Greater than the lowest signal frequency
- Less than half the lowest signal frequency
- Greater than twice the highest signal frequency
- Less than half the highest signal frequency

correct

Made by: Waqar Siddhu

Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

What is the basic function of a comparator?

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

What is meant by state assignment process?

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

VuAnswers.com



Normal Arial 12 B I U

Made by: Waqar Siddhu

Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

On the fifth clock pulse, a 4-bit Johnson sequence is $Q_0 = 0$, $Q_1 = 1$, $Q_2 = 1$, and $Q_3 = 1$. What will be the sequence after sixth clock pulse?
(Assume Q_3 represents the least significant bit)

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

VuAnswers.com

Normal Arial 12 B I U 100%

Normal Arial 12 B I U

Made by: Waqar Siddhu

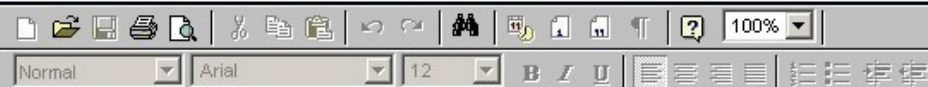
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

What is meant by Monotonicity of Digital-to-Analog converters?

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

Convert each of the following decimal numbers to Excess-3 codes:

a) 13 b) 43

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

VuAnswers.com

Normal Arial 12 B I U 100%

13=01000110

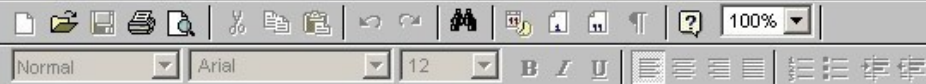
43=01110110

Made by: Waqar Siddhu

How can we calculate the frequency of an unknown signal?

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

VuAnswers.com



The frequency of the unknown signal can be calculated by counting the number of clock pulses of the unknown signal and dividing the count number by the time interval in which the clock pulses are counted,

Made by: Waqar Siddhu

Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Write down three characteristics of serial in / serial out 4-bit left shift register.

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

VuAnswers.com

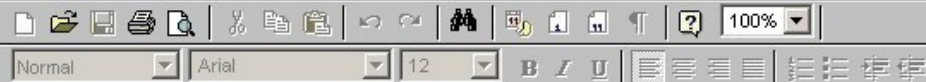


Made by: Waqar Siddhu

How DRAMs are different from SRAMs? Write three point of differences.

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

VuAnswers.com



1. SRAM is static while DRAM is dynamic
2. SRAM is faster compared to DRAM
3. SRAM consumes less power than DRAM
4. SRAM uses more transistors per bit of memory compared to DRAM
5. SRAM is more expensive than DRAM
6. Cheaper DRAM is used in main memory while SRAM

Made by: Waqar Siddhu

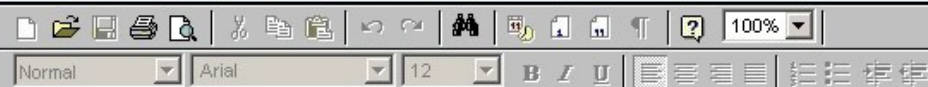
Question No : 49 of 52

Marks: 5 (Budgeted Time 10 Min)

Draw the function table of Full adder circuit.

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

VuAnswers.com

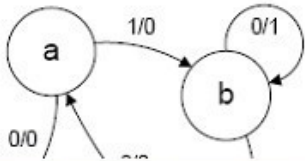


Made by: Waqar Siddhu

Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

Consider a state sequence **a, f, d, c, a, b, c, f, d, c**. Starting from initial state "a", draw a table for the inputs and outputs for the state diagram given below.



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

VuAnswers.com

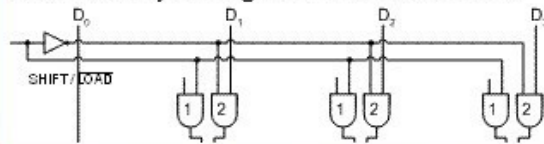


Made by: Waqar Siddhu

Question No : 51 of 52

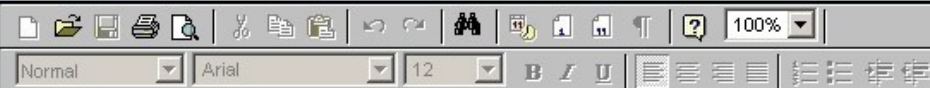
Marks: 5 (Budgeted Time 10 Min)

Given below is an incomplete circuit diagram of parallel in / serial out shift register, in which Q_0 , Q_1 , Q_2 , Q_3 , and Clock input are disconnected. Connect above mentioned connections in such a way that functionality of the given circuit is not affected.



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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

Memory chips can be connected together in different manners to increase the total size of the memory. Draw block diagram of 4K x word memory if you are given four 4K x bytes chips.

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

VuAnswers.com



Normal Arial 12 B I U

Made by: Waqar Siddhu

Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

The hexadecimal value "FD" is equivalent to binary value _____

Answer (Please select your correct option)

VuAnswers.com

11011111

11111101

correct

11001110

00010111

Made by: Waqar Siddhu

Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

"A + B = B + A" is _____

Answer (Please select your correct option)

VuAnswers.com

Demorgan's Law

Distributive Law

Commutative Law

Associative Law

correct

Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is invalid number of cells in a single group formed by the adjacent cells in K-map

Answer (Please select your correct option)

VuAnswers.com

2

8

12

correct

16

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ Encoder is used as a keypad encoder.

Answer (Please select your correct option)

VuAnswers.com

2-to-8 encoder

4-to-16 encoder

BCD-to-Decimal

Decimal-to-BCD Priority

correct

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

The Programmable Array Logic (PAL) has _____ AND array and a _____ OR array

Answer (Please select your correct option)

VuAnswers.com

- Fixed, programmable
- Programmable, fixed
- Fixed, fixed
- Programmable, programmable

correct

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

74HC163 has two enable input pins which are _____ and _____

Answer (Please select your correct option)

VuAnswers.com

ENP, ENT

correct

ENI, ENC

ENP, ENC

ENT, ENI

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

Given the state diagram of an up/down counter, we can find _____

Answer (Please select your correct option)

VuAnswers.com

- The next state of a given present state
- The previous state of a given present state
- Both the next and previous states of a given state
- The state diagram shows only the inputs/outputs of a given states

correct

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

A 4-bit parallel in / serial out shift register contains the value "0100", _____ clock signal(s) will be required to shift the value completely out of the register (i.e. to set the register to 0).

Answer (Please select your correct option)

VuAnswers.com

1

2

correct

3

4

Made by: Waqar Siddhu

Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

In Single-Precision Floating Point format, "exponent" is represented by _____ bits.

Answer (Please select your correct option)

VuAnswers.com

8-bits

16-bits

32-bits

correct

64-bits

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

A particular Full Adder has _____ inputs and _____ output(s).

Answer (Please select your correct option)

VuAnswers.com

2, 3

2, 2

3, 2

3, 3

correct

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

Programmable Array Logic (PAL) has _____ input(s) and _____ output(s).

Answer (Please select your correct option)

VuAnswers.com

Single, multiple

Multiple, single

Single, single

Multiple, multiple

correct

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

At $S = 0$ and $R = 1$, an active-HIGH SR latch is in _____ condition.

Answer (Please select your correct option)

VuAnswers.com

- SET
- RESET **correct** **not sure**
- Invalid
- No change

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

At $J = 1$, and $K = 1$, output of JK Flip-flop will be _____

Answer (Please select your correct option)

VuAnswers.com

Set



Reset



Toggle



Invalid



correct

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

The negative edge triggered flip-flop changes state on _____

Answer (Please select your correct option)

VuAnswers.com

- Positive half cycle of clock
- Negative half of clock
- Low-to-high transition of clock
- High-low transition of clock

correct

Made by: Waqar Siddhu

Question No : 15 of 52

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)

VuAnswers.com

1

2

3

4

correct

Made by: Waqar Siddhu

Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ output of first 74HC163 counter is connected to _____ and _____ inputs of other 74HC163 counter to form a single cascaded counter

Answer (Please select your correct option)

VuAnswers.com

RCO, ENT, ENP

correct

ENT, RCO, ENP

ENP, RCO, ENT

RCO, ENI, ENC

Made by: Waqar Siddhu

Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

The design and implementation of synchronous counters start from _____

Answer (Please select your correct option)

VuAnswers.com

Truth table

K-map

State table

State diagram

correct

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

The best state assignment tends to _____.

Answer (Please select your correct option)

VuAnswers.com

Maximizes the number of state variables that don't change in a group of related states

correct

Minimizes the number of state variables that don't change in a group of related states

Minimizes the equivalent states

Maximizes the equivalent states

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the \bar{Q} output of the last flip-flop of the shift register is connected to the data input of the first flip-flop.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the Q output of the last flip-flop of the shift register is connected to the data input of the first flip-flop of the shift register.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

If $S=1$ and $R=0$, then $Q(t+1) = \underline{\hspace{2cm}}$ for positive edge triggered flip-flop

Answer (Please select your correct option)

VuAnswers.com

0

1

correct

Invalid

Input is invalid

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

For a gated D-Latch, if $EN=1$ and $D=1$ then $Q(t+1) =$ _____

Answer (Please select your correct option)

VuAnswers.com

0

1

$Q(t)$

Invalid

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following is NOT a sequential circuit?

Answer (Please select your correct option)

VuAnswers.com

SR latch



Counter



Full Adder



JK Flip-flop



correct

Made by: Waqar Siddhu

Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

Each stage of Master-slave flip-flop works in _____

Answer (Please select your correct option)

VuAnswers.com

One complete clock signal

One fourth of the clock signal

One third of the clock signal

One half of the clock signal

correct **Made by: Waqar Siddhu**

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

The counter states can be determined by the formula: _____ ("n" represents the total number of flip-flops).

Answer (Please select your correct option)

VuAnswers.com

- n^2 (n raise to power 2)
- n^2-1 (n raise to power 2 and then minus 1)
- 2^n (2 raise to power n)
- 2^n-1 (2 raise to power n and then minus 1)

correct

Made by: Waqar Siddhu

Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

RCO Stands for _____

Answer (Please select your correct option)

VuAnswers.com

Reconfiguration Counter Output

Reconfiguration Clock Output

Ripple Counter Output

Ripple Clock Output

correct **Made by: Waqar Siddhu**

Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

A divide-by-50 counter divides the input _____ signal to a 1 Hz signal.

Answer (Please select your correct option)

VuAnswers.com

10 Hz



50 Hz



correct

100 Hz



500 Hz



Made by: Waqar Siddhu

Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

The alternate solution for a demultiplexer-register combination circuit is _____

Answer (Please select your correct option)

VuAnswers.com

Parallel in / Serial out shift register

Serial in / Parallel out shift register

correct

Parallel in / Parallel out shift register

Serial in / Serial Out shift register

Made by: Waqar Siddhu

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

In asynchronous transmission when the transmission line is idle, _____

Answer (Please select your correct option)

VuAnswers.com

- It is set to logic low
- It is set to logic high
- Remains in previous state
- State of transmission line is not used to start transmission

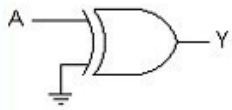
correct

Made by: Waqar Siddhu

Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

0

A

\bar{A}

correct

Made by: Waqar Siddhu

Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not characteristic of a shift register?

Answer (Please select your correct option)

VuAnswers.com

Serial in/parallel in

correct

Serial in/parallel out

Parallel in/serial out

Parallel in/parallel out

Made by: Waqar Siddhu

Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2

4

correct

8

16

Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ of a ROM is the time it takes for the data to appear at the Data Output of the ROM chip after an address is applied at the address input lines

Answer (Please select your correct option)

VuAnswers.com

Write Time

Refresh Time

Refresh Time

Access Time

correct

Made by: Waqar Siddhu

Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, all the columns in the same row are either read or written.

Answer (Please select your correct option)

VuAnswers.com

Sequential Access

MOS Access

FAST Mode Page Access

None of given options

correct

Made by: Waqar Siddhu

Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

In order to synchronize two devices that consume and produce data at different rates, we can use _____

Answer (Please select your correct option)

VuAnswers.com

- Read Only Memory
- First In First Out Memory
- Flash Memory
- Fast Page Access Mode Memory

correct

Made by: Waqar Siddhu

Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

The process of converting the analogue signal into a digital representation (code) is known as _____

Answer (Please select your correct option)

VuAnswers.com

Strobing

Amplification

Quantization

Digitization

correct

Made by: Waqar Siddhu

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

A hold action occurs :

Answer (Please select your correct option)

VuAnswers.com

After the analog-to-digital conversion

During each sample

Immediately after a sample

Before each sample

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

A flash A/D converter uses :

Answer (Please select your correct option)

VuAnswers.com

Counters

Flip-flops

Op-amps

An integrator

correct

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ of a D/A converter is determined by comparing the actual output of a D/A converter with the expected output.

Answer (Please select your correct option)

VuAnswers.com

Resolution

Accuracy

correct

Quantization

Missing Code

Made by: Waqar Siddhu

Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

Sampling of an analog signal produces :

Answer (Please select your correct option)

VuAnswers.com

- A series of impulses those are proportional to the frequency of the signal
- A series of impulses those are proportional to the amplitude of the signal
- Digital codes that represent the analog signal amplitude
- Digital codes that represent the time of each sample

Made by: Waqar Siddhu

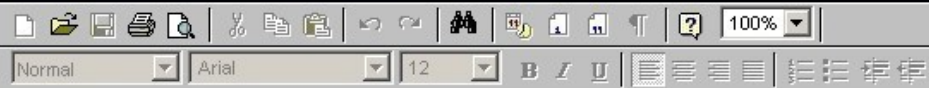
Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

How many 4-bit Parallel Adders are required to add two BCD digits?

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

VuAnswers.com



Made by: Waqar Siddhu

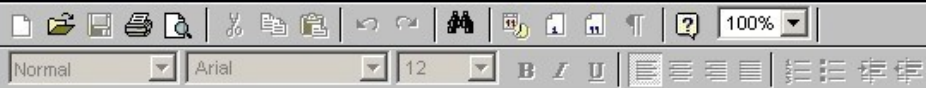
Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

What is meant by "excitation inputs"?

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

VuAnswers.com



Made by: Waqar Siddhu

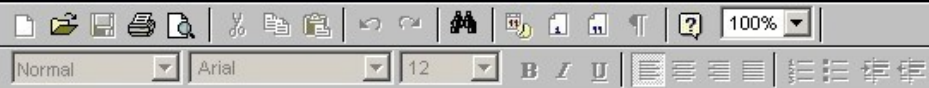
Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

How many bytes will be there in $32\text{ K} \times 4$ memory?

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

VuAnswers.com



Made by: Waqar Siddhu

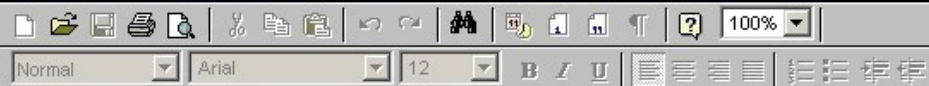
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

Generally two types of D/A Converters are used. Write down their names.

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

Draw the function table of an Half adder circuit.

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

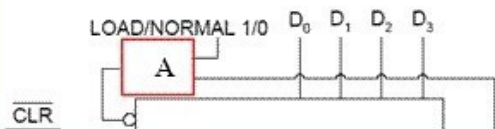
VuAnswers.com



Normal Arial 12 B I U

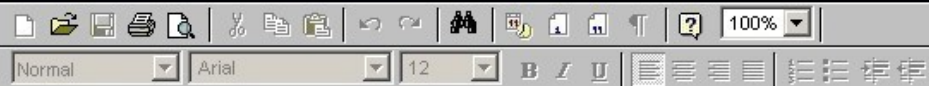
Made by: Waqar Siddhu

Following is an incomplete diagram. Name the gate which can be placed in red boxes A and B to configure 74HC161 as a Mod-9 counter.



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

VuAnswers.com



Made by: Waqar Siddhu

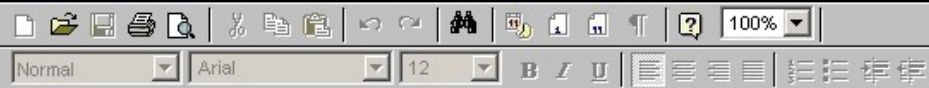
Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Draw a circuit diagram of flip-flop based static memory cell.

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

VuAnswers.com



Made by: Waqar Siddhu

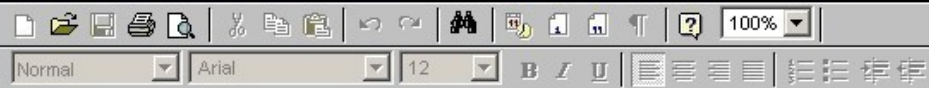
Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

What is RAM Stack, which register stores the address of top of the stack?

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 49 of 52

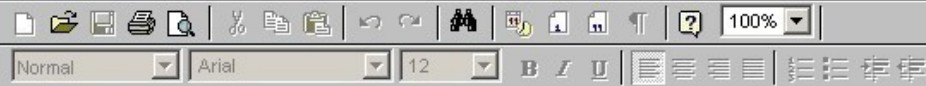
Marks: 5 (Budgeted Time 10 Min)

Simplify the following Boolean expression so that it uses minimum number of gates.

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

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

VuAnswers.com

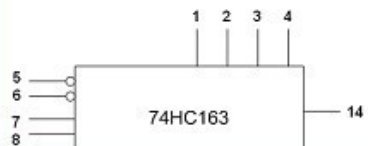


Made by: Waqar Siddhu

Question No : 50 of 52

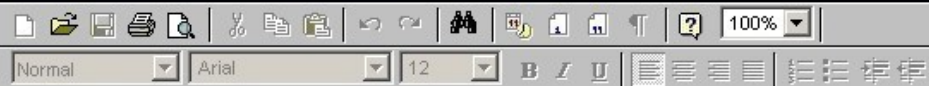
Marks: 5 (Budgeted Time 10 Min)

You are given the block diagram of 74HC163 4-bit Synchronous Counter. Connect two 74HC163 4-bit Synchronous Counters to form a single Cascaded Decade Counter.



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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 51 of 52

Marks: 5 (Budgeted Time 10 Min)

State table for a mealy machine is given below. Derive a state diagram for mealy machine from this state table.

| Present State | Next State | | | | Output Z | | | |
|---------------|------------|----------|----------|----------|----------|----------|----------|----------|
| | XY 00 | XY 01 | XY 10 | XY 11 | XY 00 | XY 01 | XY 10 | XY 11 |
| A | A | C | B | C | 0 | 1 | 0 | 1 |
| B | B | D | C | D | 0 | 0 | 0 | 0 |

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

VuAnswers.com

Rich text editor toolbar with icons for file operations, editing, and formatting. The font is set to Arial, size 12. The zoom level is 100%.

Made by: Waqar Siddhu

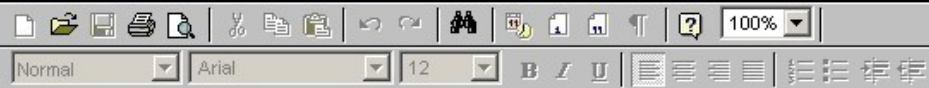
Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

What is operational amplifier and how it can be used as an inverting amplifier? Write down the relation for its voltage gain.

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

Excess-8 code assigns _____ to "-8"

Answer (Please select your correct option)

VuAnswers.com

1110



1100



1000



0000



correct

Made by: Waqar Siddhu

Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

The Extended ASCII Code (American Standard Code for Information Interchange) represents _____ unique codes

Answer (Please select your correct option)

VuAnswers.com

256

correct

255

128

127

Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

The 3-variable Karnaugh Map (K-Map) has _____ cells for min or max terms

Answer (Please select your correct option)

VuAnswers.com

4

8

12

16

correct

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

The active high and active low inputs of 3-to-8 Decoder are as follows:

Answer (Please select your correct option)

VuAnswers.com

One active-high and the remaining two are active-low.

correct

Two active-high and the remaining one is active-low.

All active high

All active low

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

Two 2-input, 4-bit multiplexers 74X157 can be connected to implement a ____ multiplexer.

Answer (Please select your correct option)

VuAnswers.com

2-input, 4-bit

4-input, 8-bit

4-input, 16-bit

2-input, 8-bit

correct

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

GAL is an acronym for _____.

Answer (Please select your correct option)

VuAnswers.com

Generic Analysis Logic

Giant Array Logic

General Array Logic

Generic Array Logic

correct

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

74HC163 has two enable input pins which are _____ and _____

Answer (Please select your correct option)

VuAnswers.com

ENP, ENT

correct

ENI, ENC

ENP, ENC

ENT, ENI

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

$A.(B + C) = A.B + A.C$ is an expression of _____

Answer (Please select your correct option)

VuAnswers.com

Demorgan's Law

Commutative Law

Distributive Law

Associative Law

correct

Made by: Waqar Siddhu

Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

An 8-bit serial in / parallel out shift register contains the value "8", _____ clock signal(s) will be required to shift the value completely out of the register.

Answer (Please select your correct option)

VuAnswers.com

1 **correct**

2

4

8

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

2's complement of -5 is _____

Answer (Please select your correct option)

VuAnswers.com

1000

1011

correct

1100

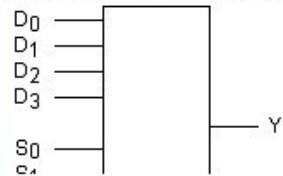
1110

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

The device shown here is most likely a _____



Answer (Please select your correct option)

VuAnswers.com

Comparator

Multiplexer

correct

Demultiplexer

Parity generator

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

What will be output state when $J = 1$, $K = 0$ and CLR input is active?

Answer (Please select your correct option)

VuAnswers.com

- Q = 1
- Q = 0
- Retains previous output state
- Toggle output

correct

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

Which of the following statement is true?

Answer (Please select your correct option)

VuAnswers.com

- Power consumption of TTL is higher than CMOS
- Power consumption of CMOS is higher than TTL
- Both TTL and CMOS have same power consumption
- Power consumption of both CMOS and TTL depends on number of gates in the circuit.

correct

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)



_____ counters as the name indicates are not triggered simultaneously.

Answer (Please select your correct option)

VuAnswers.com

Synchronous



Asynchronous



correct

Positive-Edge triggered



Negative-Edge triggered



Made by: Waqar Siddhu

_____ is said to occur when multiple internal variables change due to change in one input variable.

Answer (Please select your correct option)

VuAnswers.com

Race condition

correct

Propagation delay

Ripple effect

Clock skew

Made by: Waqar Siddhu

Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

A 5-bit counter has a maximum _____ modulus.

Answer (Please select your correct option)

VuAnswers.com

10

16

25

32

correct

Made by: Waqar Siddhu

Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit whose output depends on the current state and the input is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

Mealy Machine

correct

Counter

Flip Flop

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the \bar{Q} output of the last flip-flop of the shift register is connected to the data input of the first flip-flop.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

The power consumed by a flip-flop is defined by _____

Answer (Please select your correct option)

VuAnswers.com

$P = I_{cc} \times R_{cc}$

$P = V_{cc} \times R_{cc}$

$P = V_{cc} \times I_{cc}$

correct

$P = M_{cc} \times V_{cc}$

Made by: Waqar Siddhu

Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

The minimum time required for the input logic levels to remain stable before the clock transition occurs is known as the _____

Answer (Please select your correct option)

VuAnswers.com

Pulse Stability time (PST)

Set-up time

correct

Hold time

Pulse Interval time

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

RCO Stands for _____

Answer (Please select your correct option)

VuAnswers.com

Reconfiguration Counter Output

Reconfiguration Clock Output

Ripple Counter Output

Ripple Clock Output

correct

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

We have a digital circuit. Different parts of circuit operate at different clock frequencies (4MHZ, 2MHZ and 1MHZ), but we have a single clock source having a fix clock frequency (4MHZ), we can get help by using _____

Answer (Please select your correct option)

VuAnswers.com

T-Flop-Flop

S-R Flop-Flop

D-Flop-Flop

J-K Flop-Flop

correct

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit, whose output is determined by the current state only is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

correct

Mealy Machine

Counter

Flip Flop

Made by: Waqar Siddhu

Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

State Machine is a generic name given to _____

Answer (Please select your correct option)

VuAnswers.com

Sequential circuits

correct

Combinational circuits

Flip-flops

Counters

Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is used to minimize the possible no. of states of a circuit.

Answer (Please select your correct option)

VuAnswers.com

State assignment

correct

State reduction

Next state table

State diagram

Made by: Waqar Siddhu

Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is used to simplify the circuit that determines the next state.

Answer (Please select your correct option)

VuAnswers.com

State diagram

Next state table

State reduction

State assignment

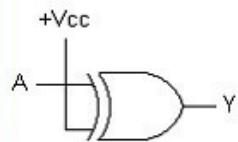
correct

Made by: Waqar Siddhu

Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

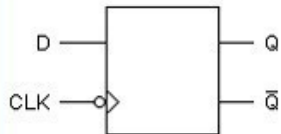
0

A

\bar{A}

correct

Made by: Waqar Siddhu



Which of the following statement is true regarding above block diagram ?

Answer (Please select your correct option)

VuAnswers.com

- Triggering takes place on the negative-going edge of the CLK pulse
- Triggering takes place on the positive-going edge of the CLK pulse
- Triggering can take place anytime during the LOW level of the CLK waveform
- Triggering can take place anytime during the LOW level of the CLK waveform

correct

Made by: Waqar Siddhu

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not characteristic of a shift register?

Answer (Please select your correct option)

VuAnswers.com

Serial in/parallel in

correct

Serial in/parallel out

Parallel in/serial out

Parallel in/parallel out

Made by: Waqar Siddhu

Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

Assume that a 4-bit serial in/serial out shift register is initially clear. We wish to store the nibble 1100. What will be the 4-bit pattern after the second clock pulse? (Right-most bit first.)

Answer (Please select your correct option)

VuAnswers.com

1100



0011



0000



correct

1111



Made by: Waqar Siddhu

Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

A bidirectional 4-bit shift register is storing the nibble 1110. Its RIGHT/LEFT input is LOW. The nibble 0111 is waiting to be entered on the serial data-input line. After two clock pulses, the shift register is storing _____.

Answer (Please select your correct option)

VuAnswers.com

1110

0111

1000

1001

correct

Made by: Waqar Siddhu

Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit **correct**

Nibble

Byte

Word

Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ of a ROM is the time it takes for the data to appear at the Data Output of the ROM chip after an address is applied at the address input lines

Answer (Please select your correct option)

VuAnswers.com

Write Time

Refresh Time

Refresh Time

Access Time

correct

Made by: Waqar Siddhu

Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

The high density FLASH memory cell is implemented using _____

Answer (Please select your correct option)

VuAnswers.com

1 floating-gate MOS transistor

correct

2 floating-gate MOS transistors

4 floating-gate MOS transistors

6 floating-gate MOS transistors

Made by: Waqar Siddhu

Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

The total amount of memory that is supported by any digital system depends upon _____

Answer (Please select your correct option)

VuAnswers.com

The size of the address bus of the microprocessor

correct

The organization of memory

The structure of memory

The size of decoding unit

Made by: Waqar Siddhu

Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

The voltage gain of the Inverting Amplifier is given by the relation _____

Answer (Please select your correct option)

VuAnswers.com

$V_{out} / V_{in} = - R_f / R_i$

correct

$V_{out} / R_f = - V_{in} / R_i$

$R_f / V_{in} = - R_i / V_{out}$

$R_f / V_{in} = R_i / V_{out}$

Made by: Waqar Siddhu

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

The process of converting the analogue signal into a digital representation (code) is known as _____

Answer (Please select your correct option)

VuAnswers.com

Strobing

Amplification

Quantization

Digitization

correct

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

A flash A/D converter uses :

Answer (Please select your correct option)

VuAnswers.com

Counters

Flip-flops

Op-amps

An integrator

correct

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ of a D/A converter is determined by comparing the actual output of a D/A converter with the expected output.

Answer (Please select your correct option)

VuAnswers.com

Resolution

Accuracy

correct

Quantization

Missing Code

Made by: Waqar Siddhu

Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

In a binary-weighted D/A converter, the resistors on the inputs :

Answer (Please select your correct option)

VuAnswers.com

- Limit the power consumption
- Prevent loading on the source
- Determine the weights of the digital inputs
- Determine the amplitude of the analog signal

correct

Made by: Waqar Siddhu

Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

Identify the following quantities as analog and digital.

- a) Pressure in a bicycle tire
- b) Number of students in a class
- c) Speed of a car
- d) Temperature

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

VuAnswers.com



Made by: Waqar Siddhu

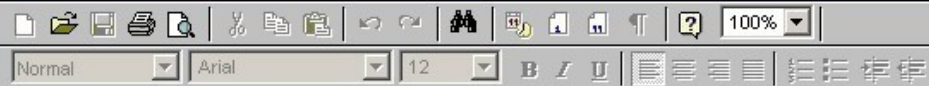
Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

What is strobing method?

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

VuAnswers.com



Made by: Waqar Siddhu

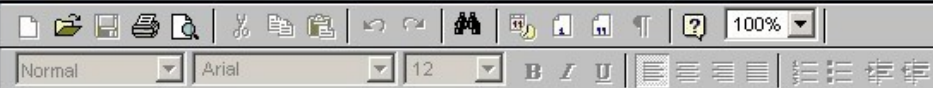
Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

Write down any two applications of shift registers.

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

VuAnswers.com



Made by: Waqar Siddhu

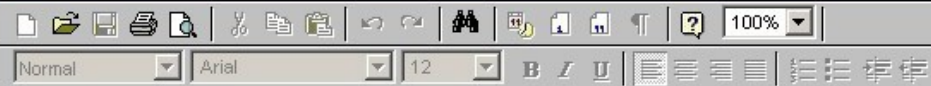
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

How many address bits are required for a 2048-bit memory organized as a 256 x 8 memory?

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

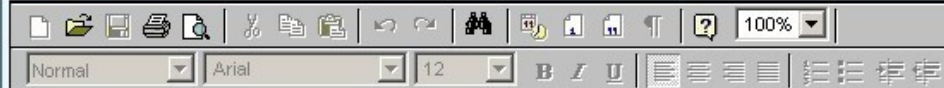
Express each decimal number in binary as an 8-bit sign-magnitude number:

(a) +29

(b) -85

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

VuAnswers.com



Made by: Waqar Siddhu

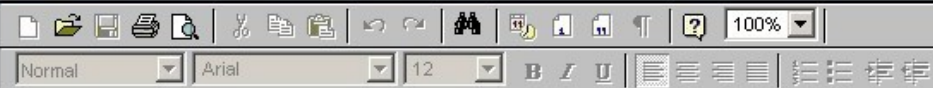
Question No : 46 of 52

Marks: 3 (Budgeted Time 6 Min)

How can we calculate the frequency of an unknown signal?

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

VuAnswers.com



Made by: Waqar Siddhu

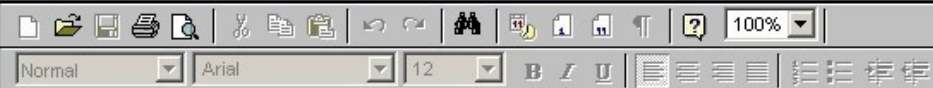
Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Suppose a 2 bit up-down counter having states "A, B, C, D". The counter counts upward when $X=1$ and downward when $X=0$. Write down IF-THEN-ELSE statements to show how present states change to next states and previous states.

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

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

VuAnswers.com

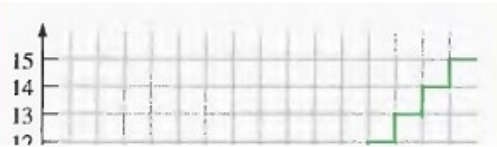
Rich text editor toolbar with icons for file operations, undo/redo, bold, italic, underline, list, and a 100% zoom level.

Made by: Waqar Siddhu

Question No : 48 of 52

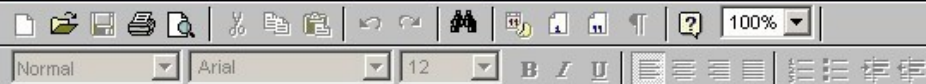
Marks: 3 (Budgeted Time 6 Min)

A 4-bit flash A/D converter is tested for faults. The resulting reconstructed analog output is shown below. Identify the problem and the most probable reason due to which this fault is occurred.



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

VuAnswers.com



Made by: Waqar Siddhu

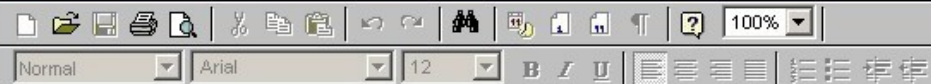
Convert the following caveman numbers into decimal numbers, perform all the steps.

a) $\Omega \uparrow \Sigma$

b) $\uparrow \Delta \Delta \Sigma$

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

VuAnswers.com



Made by: Waqar Siddhu

You are given the Next-state table of a moor machine, using this information draw the state diagram of the machine.

| Present State | | | Next State | | |
|----------------|----------------|----------------|----------------|----------------|----------------|
| Q ₂ | Q ₁ | Q ₀ | Q ₂ | Q ₁ | Q ₀ |
| 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 | 1 | 0 |

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

VuAnswers.com



A rich text editor toolbar with various icons for text formatting and editing. It includes options for bold (B), italic (I), underline (U), text color, background color, bulleted list, numbered list, indent, and zoom (100%).

Made by: Waqar Siddhu

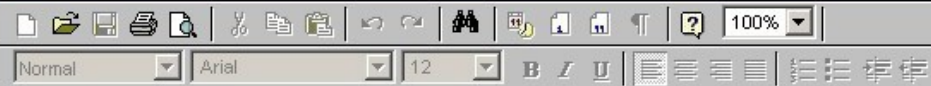
Question No : 51 of 52

Marks: 5 (Budgeted Time 10 Min)

Make block diagram of Rotate Left Operation of a shift register and explain its working.

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

VuAnswers.com



Made by: Waqar Siddhu

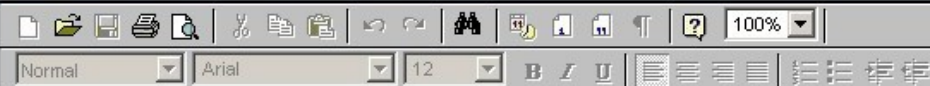
Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

Analog to Digital converters exhibit different types of errors during their conversion operation. Explain at least two.

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

Caveman number system is Base _____ number system

Answer (Please select your correct option)

VuAnswers.com

2

5

10

16

correct

Made by: Waqar Siddhu

Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

If two numbers in BCD representation generate an invalid BCD number then the binary _____ is added to the result

Answer (Please select your correct option)

VuAnswers.com

1001



0110



correct

1111



1100



Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

The Gray code is different from the unsigned binary code because _____

Answer (Please select your correct option)

VuAnswers.com

Successive values of Gray code differ by only one bit

correct

Gray Code is positional code

Gray Code does not support negative values

Gray Code ranges from "0" to "9"

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

"74ALS" stands for _____

Answer (Please select your correct option)

VuAnswers.com

Advanced Low-frequency Schottky TTL

Advanced Low-dissipation Schottky TTL

Advanced Low-Power Schottky TTL

correct

Advanced Low-propagation Schottky TTL

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

The 3-variable Karnaugh Map (K-Map) has _____ cells for min or max terms

Answer (Please select your correct option)

VuAnswers.com

4

8

correct

12

16

Made by: Waqar Siddhu

Question No : 6 of 52

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)

VuAnswers.com

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

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

The PROM consists of a fixed non-programmable _____ Gate array configured as a decoder.

Answer (Please select your correct option)

VuAnswers.com

AND

correct

OR

NOT

XOR

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

In a sequential circuit the next state is determined by _____ and _____.

Answer (Please select your correct option)

VuAnswers.com

- State variable, current state
- Current state, flip-flop output
- Current state and external input
- Input and clock signal applied

correct

Made by: Waqar Siddhu

Question No : 9 of 52

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)

VuAnswers.com

3.5 to 5

correct

4.5 to 5

0 to 5

0 to 3.5

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

What will be output state when $J = 1$, $K = 0$ and CLR input is active?

Answer (Please select your correct option)

VuAnswers.com

Q = 1
correct

Q = 0

Retains previous output state

Toggle output

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

A feature that distinguishes JK flip-flop from SR flip-flop is _____

Answer (Please select your correct option)

VuAnswers.com

Toggle condition

correct

Preset input

Type of clock

Clear input

Made by: Waqar Siddhu

Question No : 12 of 52

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)

VuAnswers.com

$AB+C = A+BC$

$A(B+C) = B(A+C)$

$AB=BA$

correct

$A+B=B+A$

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

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

Answer (Please select your correct option)

VuAnswers.com

1110 + 0110 + 0001

correct

1011 + 1111 + 1011

0001 + 1001 + 1110

1010 + 1110 + 0101

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

The design and implementation of synchronous counters start from _____

Answer (Please select your correct option)

VuAnswers.com

Truth table

K-map

State table

State diagram

correct

Made by: Waqar Siddhu

Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

In a state diagram, the transition from a current state to the next state is determined by _____ and _____

Answer (Please select your correct option)

VuAnswers.com

Current state, inputs

correct

Current state, outputs

Previous state, inputs

Previous state, outputs

Made by: Waqar Siddhu

Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the \bar{Q} output of the last flip-flop of the shift register is connected to the data input of the first flip-flop.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

The sequence of states that are implemented by a n-bit Johnson counter is _____

Answer (Please select your correct option)

VuAnswers.com

$n+2$ (n plus 2)

$2n$ (n multiplied by 2)

correct

2^n (2 raise to power n)

n^2 (n raise to power 2)

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

Flip flops are also called _____

Answer (Please select your correct option)

VuAnswers.com

Bi-stable dualvibrators

Bi-stable transformer

Bi-stable multivibrators

Bi-stable singlevibrators

correct

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

For a gated D-Latch, if $EN=1$ and $D=1$ then $Q(t+1) =$ _____

Answer (Please select your correct option)

VuAnswers.com

0

1

correct

$Q(t)$

Invalid

Made by: Waqar Siddhu

Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

The operation of J-K flip-flop is similar to that of the SR flip-flop except that the J-K flip-flop _____

Answer (Please select your correct option)

VuAnswers.com

- Doesn't have an invalid state
- Sets to clear when both $J = 0$ and $K = 0$
- It does not show transition on change in pulse
- It does not accept asynchronous inputs

correct

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

The minimum time for which the input signal has to be maintained at the input of flip-flop is called _____ of the flip-flop.

Answer (Please select your correct option)

VuAnswers.com

Set-up time

Pulse Stability time (PST)

Hold time

correct

Pulse Interval time

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ input overrides the _____ input

Answer (Please select your correct option)

VuAnswers.com

Asynchronous, synchronous

correct

Synchronous, asynchronous

Preset input (PRE), clear input (CLR)

Clear input (CLR), preset input (PRE)

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

The divide-by-60 counter in digital clock is implemented by using two cascading counters:

Answer (Please select your correct option)

VuAnswers.com

Mod-6, Mod-10

correct

Mod-50, Mod-10

Mod-10, Mod-50

Mod-50, Mod-6

Made by: Waqar Siddhu

Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

The hours counter is implemented using _____.

Answer (Please select your correct option)

VuAnswers.com

- Mod-10 and Mod-2 counters
- A single decade counter and a flip-flop
- Only a single Mod-12 counter is required
- Mod-10 and Mod-6 counters

correct

Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

State Machine is a generic name given to _____

Answer (Please select your correct option)

VuAnswers.com

Sequential circuits

correct

Combinational circuits

Flip-flops

Counters

Made by: Waqar Siddhu

Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ is used to simplify the circuit that determines the next state.

Answer (Please select your correct option)

VuAnswers.com

State diagram

Next state table

State reduction

State assignment

correct

Made by: Waqar Siddhu

Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

The alternate solution for a demultiplexer-register combination circuit is _____

Answer (Please select your correct option)

VuAnswers.com

Parallel in / Serial out shift register

Serial in / Parallel out shift register

correct

Parallel in / Parallel out shift register

Serial in / Serial Out shift register

Made by: Waqar Siddhu

Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

In the following statement
Z PIN 20 ISTYPE 'reg.invert';
The keyword "reg.invert" indicates _____

Answer (Please select your correct option)

VuAnswers.com

- An inverted register input
- An inverted register input at pin 20
- Active-high Registered Mode output
- Active-low Registered Mode output

correct **Made by: Waqar Siddhu**

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

A GAL is essentially a _____.

Answer (Please select your correct option)

VuAnswers.com

- Non-reprogrammable PAL
- PAL that is programmed only by the manufacturer
- Reprogrammable PAL
- Reprogrammable PAL

correct

Made by: Waqar Siddhu

Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not characteristic of a shift register?

Answer (Please select your correct option)

VuAnswers.com

Serial in/parallel in

correct

Serial in/parallel out

Parallel in/serial out

Parallel in/parallel out

Made by: Waqar Siddhu

Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

Assume that a 4-bit serial in/serial out shift register is initially clear. We wish to store the nibble 1100. What will be the 4-bit pattern after the second clock pulse? (Right-most bit first.)

Answer (Please select your correct option)

VuAnswers.com

1100



0011



0000



1111



correct

Made by: Waqar Siddhu

Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2



4



correct

8



16



Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

The address, from which the data is read, is provided by _____

Answer (Please select your correct option)

VuAnswers.com

Depends on circuitry

None of given options

RAM

Microprocessor

correct

Made by: Waqar Siddhu

Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

FIFO is an acronym for _____

Answer (Please select your correct option)

VuAnswers.com

First In, First Out

correct

Fly in, Fly Out

Fast in, Fast Out

None of given options

Made by: Waqar Siddhu

Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

In order to synchronize two devices that consume and produce data at different rates, we can use _____

Answer (Please select your correct option)

VuAnswers.com

- Read Only Memory
- First In First Out Memory
- Flash Memory
- Fast Page Access Mode Memory

correct

Made by: Waqar Siddhu

Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

If the FIFO Memory output is already filled with data then _____

Answer (Please select your correct option)

VuAnswers.com

- It is locked; no data is allowed to enter
- It is not locked; the new data overwrites the previous data.
- Previous data is swapped out of memory and new data enters
- None of given options

correct **Made by: Waqar Siddhu**

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

The voltage gain of the Inverting Amplifier is given by the relation _____

Answer (Please select your correct option)

VuAnswers.com

$V_{out} / V_{in} = - R_f / R_i$

correct

$V_{out} / R_f = - V_{in} / R_i$

$R_f / V_{in} = - R_i / V_{out}$

$R_f / V_{in} = R_i / V_{out}$

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

The process of converting the analogue signal into a digital representation (code) is known as _____

Answer (Please select your correct option)

VuAnswers.com

Strobing

Amplification

Quantization

Digitization

correct

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

Sampling of an analog signal produces :

Answer (Please select your correct option)

VuAnswers.com

- A series of impulses those are proportional to the frequency of the signal
- A series of impulses those are proportional to the amplitude of the signal
- Digital codes that represent the analog signal amplitude
- Digital codes that represent the time of each sample

Made by: Waqar Siddhu

Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

In a binary-weighted D/A converter, the resistors on the inputs :

Answer (Please select your correct option)

VuAnswers.com

- Limit the power consumption
- Prevent loading on the source
- Determine the weights of the digital inputs
- Determine the amplitude of the analog signal

Made by: Waqar Siddhu

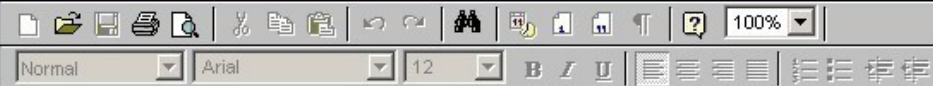
Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

Write down the ABEL symbols that are used for NOT, AND, OR and XOR operations.

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

VuAnswers.com



Made by: Waqar Siddhu

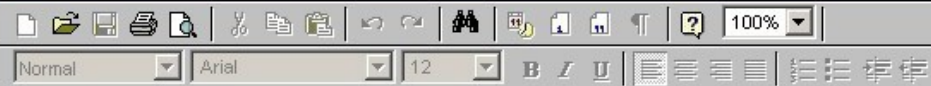
Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

What is meant by state variable?

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

VuAnswers.com



Made by: Waqar Siddhu

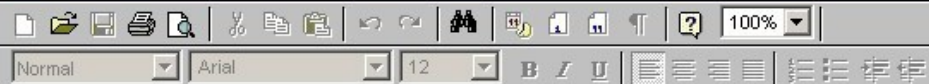
Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

The group of bits 10110111 is serially shifted (right-most bit first) into an 8-bit parallel output shift register with an initial state 11110000. What will be the contents of register after two clock pulses?

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

VuAnswers.com



Made by: Waqar Siddhu

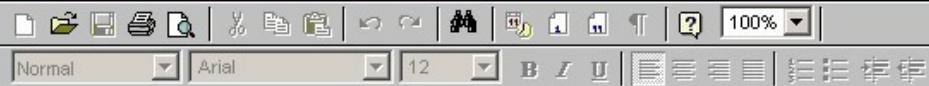
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

What is the function of row and column decoders?

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

VuAnswers.com

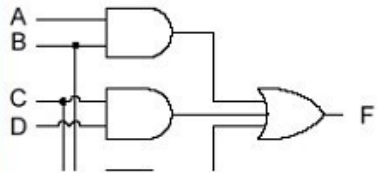


Made by: Waqar Siddhu

Question No : 45 of 52

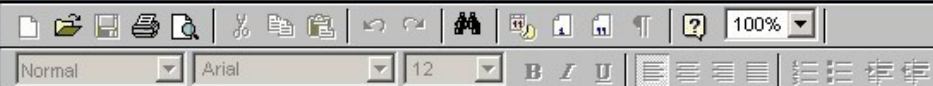
Marks: 3 (Budgeted Time 6 Min)

From the circuit diagram given below derive the output expression.



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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 46 of 52

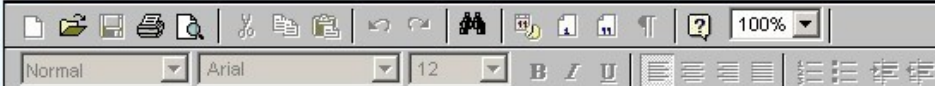
Marks: 3 (Budgeted Time 6 Min)

Following is an incomplete circuit of 3-bit Synchronous Down-counter, in which flip-flop 3 is left unconnected. Connect this 3rd flip-flop with flip-flop 2 in such a way that functionality of 3-bit Synchronous Down-counter is achieved.



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

VuAnswers.com



Made by: Waqar Siddhu

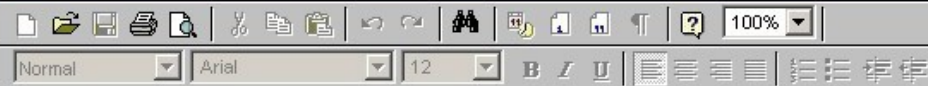
Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Suppose a 2 bit up-down counter having states "A, B, C, D". The counter counts upward when $X=1$ and downward when $X=0$. Write down IF-THEN-ELSE statements to show how present states change to next states and previous states.

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

VuAnswers.com



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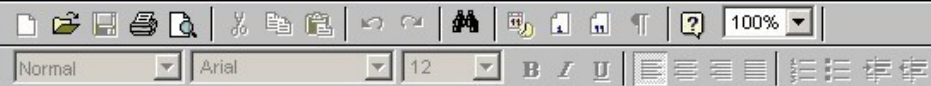
Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

How DRAMs are different from SRAMs? Write three point of differences.

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

VuAnswers.com



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Question No : 49 of 52

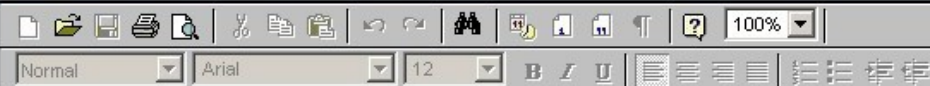
Marks: 5 (Budgeted Time 10 Min)

Using K- map, minimize the following POS expression:

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

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

VuAnswers.com



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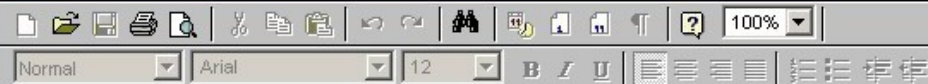
Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

Draw the state diagram of a 3-bit up-down counter. Use an external input X ; when X sets to logic 1, the counter counts downward otherwise counts upward.

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

VuAnswers.com

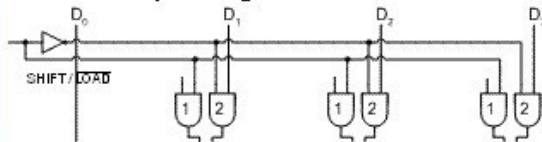


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Question No : 51 of 52

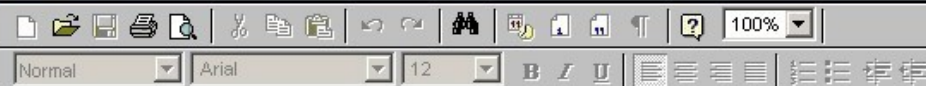
Marks: 5 (Budgeted Time 10 Min)

Given below is an incomplete circuit diagram of parallel in / serial out shift register, in which Q0, Q1, Q2, Q3, and Clock input are disconnected. Connect above mentioned connections in such a way that functionality of the given circuit is not affected.



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

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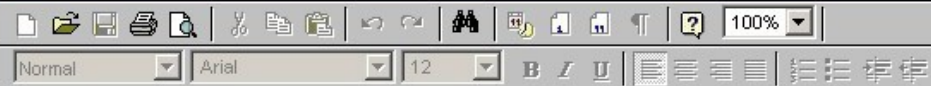
Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

How a registered based LIFO memory is implemented? Draw block diagram of five bytes registered based LIFO memory.

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

VuAnswers.com

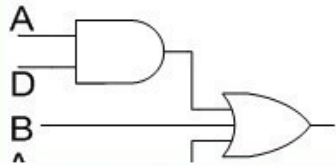


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Question No : 1 of 52

Marks: 1 (Budgeted Time 1 Min)

The diagram given below represents _____



Answer (Please select your correct option)

VuAnswers.com

Demorgans law

Associative law

Product of sum form

Sum of product form

correct

Made by: Waqar Siddhu

Question No : 2 of 52

Marks: 1 (Budgeted Time 1 Min)

The decimal "8" is represented as _____ using Gray-Code.

Answer (Please select your correct option)

VuAnswers.com

0011

1100

correct

1000

1010

Made by: Waqar Siddhu

Question No : 3 of 52

Marks: 1 (Budgeted Time 1 Min)

The binary numbers $A = 1100$ and $B = 1001$ are applied to the inputs of a comparator. What are the output levels?

Answer (Please select your correct option)

VuAnswers.com

$A > B = 1, A < B = 0, A = B = 1$

$A > B = 0, A < B = 1, A = B = 0$

$A > B = 1, A < B = 0, A = B = 0$

$A > B = 0, A < B = 1, A = B = 1$

Made by: Waqar Siddhu

Question No : 4 of 52

Marks: 1 (Budgeted Time 1 Min)

The simplest of the Encoders are the _____ Encoders

Answer (Please select your correct option)

VuAnswers.com

2^{n-1} -to- n

n -to- $2n$

2^n -to- n

correct

n -to- 2^{n-1}

Made by: Waqar Siddhu

Question No : 5 of 52

Marks: 1 (Budgeted Time 1 Min)

Using multiplexer as parallel to serial converter requires _____ connected to the multiplexer

Answer (Please select your correct option)

VuAnswers.com

A parallel to serial converter circuit

correct

A counter circuit

A BCD to Decimal decoder

A 2-to-8 bit decoder

Made by: Waqar Siddhu

Question No : 6 of 52

Marks: 1 (Budgeted Time 1 Min)

74HC163 has two enable input pins which are _____ and _____

Answer (Please select your correct option)

VuAnswers.com

ENP, ENT

correct

ENI, ENC

ENP, ENC

ENT, ENI

Made by: Waqar Siddhu

Question No : 7 of 52

Marks: 1 (Budgeted Time 1 Min)

Given the state diagram of an up/down counter, we can find _____

Answer (Please select your correct option)

VuAnswers.com

- The next state of a given present state
- The previous state of a given present state
- Both the next and previous states of a given state
- The state diagram shows only the inputs/outputs of a given states

correct

Made by: Waqar Siddhu

Question No : 8 of 52

Marks: 1 (Budgeted Time 1 Min)

A 4-bit parallel in / serial out shift register contains the value "0100", _____ clock signal(s) will be required to shift the value completely out of the register (i.e. to set the register to 0).

Answer (Please select your correct option)

VuAnswers.com

1

2

3

4

correct

Made by: Waqar Siddhu

Question No : 9 of 52

Marks: 1 (Budgeted Time 1 Min)

$(A + B)(A + \bar{B} + C)(\bar{A} + C)$ is an example of _____

Answer (Please select your correct option)

VuAnswers.com

Product of sum form

correct

Sum of product form

Demorgans law

Associative law

Made by: Waqar Siddhu

Question No : 10 of 52

Marks: 1 (Budgeted Time 1 Min)

The 2's complement method is used to _____

Answer (Please select your correct option)

VuAnswers.com

Convert binary numbers to decimal

Convert decimal numbers to binary

Represent signed numbers

Represent positive numbers

correct

Made by: Waqar Siddhu

Question No : 11 of 52

Marks: 1 (Budgeted Time 1 Min)

1011 – 101 = _____

Note: both values are in binary

Answer (Please select your correct option)

VuAnswers.com

1100

0110

correct

0011

1001

Made by: Waqar Siddhu

Question No : 12 of 52

Marks: 1 (Budgeted Time 1 Min)

At $J = 1$, and $K = 1$, output of JK Flip-flop will be _____

Answer (Please select your correct option)

VuAnswers.com

Set



Reset



Toggle



Invalid



correct

Made by: Waqar Siddhu

Question No : 13 of 52

Marks: 1 (Budgeted Time 1 Min)

When one 1 is 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)

VuAnswers.com

0

1

2

3

correct

Made by: Waqar Siddhu

Question No : 14 of 52

Marks: 1 (Budgeted Time 1 Min)

Using 15 digits (including the sign digit) notation the largest number that can be represented is _____

Answer (Please select your correct option)

VuAnswers.com

$999,999,999,999 \times 10^{100}$

$0.999,999,999,999 \times 10^{100}$

$999,999,999,999 \times 10^{99}$

$0.999,999,999,999 \times 10^{99}$

correct

Made by: Waqar Siddhu

Question No : 15 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ output of first 74HC163 counter is connected to _____ and _____ inputs of other 74HC163 counter to form a single cascaded counter

Answer (Please select your correct option)

VuAnswers.com

RCO, ENT, ENP

correct

ENT, RCO, ENP

ENP, RCO, ENT

RCO, ENI, ENC

Made by: Waqar Siddhu

Question No : 16 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit whose output depends on the current state and the input is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

Mealy Machine

correct

Counter

Flip Flop

Made by: Waqar Siddhu

Question No : 17 of 52

Marks: 1 (Budgeted Time 1 Min)

The best state assignment tends to _____.

Answer (Please select your correct option)

VuAnswers.com

Maximizes the number of state variables that don't change in a group of related states

correct

Minimizes the number of state variables that don't change in a group of related states

Minimizes the equivalent states

Maximizes the equivalent states

Made by: Waqar Siddhu

Question No : 18 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the \bar{Q} output of the last flip-flop of the shift register is connected to the data input of the first flip-flop.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 19 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, the Q output of the last flip-flop of the shift register is connected to the data input of the first flip-flop of the shift register.

Answer (Please select your correct option)

VuAnswers.com

Moore machine

Mealy machine

Johnson counter

Ring counter

correct

Made by: Waqar Siddhu

Question No : 20 of 52

Marks: 1 (Budgeted Time 1 Min)

Flip flops are also called _____

Answer (Please select your correct option)

VuAnswers.com

Bi-stable dualvibrators

Bi-stable transformer

Bi-stable multivibrators

Bi-stable singlevibrators

correct

Made by: Waqar Siddhu

Question No : 21 of 52

Marks: 1 (Budgeted Time 1 Min)

If $S=1$ and $R=0$, then $Q(t+1) = \underline{\hspace{2cm}}$ for positive edge triggered flip-flop

Answer (Please select your correct option)

VuAnswers.com

0

correct

1

Invalid

Input is invalid

Made by: Waqar Siddhu

Question No : 22 of 52

Marks: 1 (Budgeted Time 1 Min)

The operation of J-K flip-flop is similar to that of the SR flip-flop except that the J-K flip-flop _____

Answer (Please select your correct option)

VuAnswers.com

- Doesn't have an invalid state
- Sets to clear when both $J = 0$ and $K = 0$
- It does not show transition on change in pulse
- It does not accept asynchronous inputs

Made by: Waqar Siddhu

Question No : 23 of 52

Marks: 1 (Budgeted Time 1 Min)

_____ Flip-flops are obsolete now.

Answer (Please select your correct option)

VuAnswers.com

Edge-triggered

Master-Slave

correct

T-Flip-flop

D-Flip-flop

Made by: Waqar Siddhu

Question No : 24 of 52

Marks: 1 (Budgeted Time 1 Min)

Bi-stable devices remain in either of their _____ states unless the inputs force the device to switch its state.

Answer (Please select your correct option)

VuAnswers.com

Ten



Eight



Three



Two



correct

Made by: Waqar Siddhu

Question No : 25 of 52

Marks: 1 (Budgeted Time 1 Min)

The counter states can be determined by the formula: _____ ("n" represents the total number of flip-flops).

Answer (Please select your correct option)

VuAnswers.com

- n^2 (n raise to power 2)
- n^2-1 (n raise to power 2 and then minus 1)
- 2^n (2 raise to power n)
- 2^n-1 (2 raise to power n and then minus 1)

correct

Made by: Waqar Siddhu

Question No : 26 of 52

Marks: 1 (Budgeted Time 1 Min)

RCO Stands for _____

Answer (Please select your correct option)

VuAnswers.com

Reconfiguration Counter Output

Reconfiguration Clock Output

Ripple Counter Output

Ripple Clock Output

correct

Made by: Waqar Siddhu

Question No : 27 of 52

Marks: 1 (Budgeted Time 1 Min)

The Sequential circuit, whose output is determined by the current state only is known as _____.

Answer (Please select your correct option)

VuAnswers.com

Moore Machine

correct

Mealy Machine

Counter

Flip Flop

Made by: Waqar Siddhu

Question No : 28 of 52

Marks: 1 (Budgeted Time 1 Min)

A GAL is essentially a _____.

Answer (Please select your correct option)

VuAnswers.com

- Non-reprogrammable PAL
- PAL that is programmed only by the manufacturer
- Reprogrammable PAL
- Reprogrammable PAL

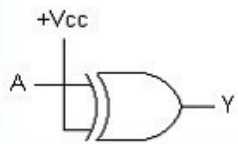
correct

Made by: Waqar Siddhu

Question No : 29 of 52

Marks: 1 (Budgeted Time 1 Min)

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

0

A

\bar{A}

correct

Made by: Waqar Siddhu

Question No : 30 of 52

Marks: 1 (Budgeted Time 1 Min)

Which is not characteristic of a shift register?

Answer (Please select your correct option)

VuAnswers.com

Serial in/parallel in

correct

Serial in/parallel out

Parallel in/serial out

Parallel in/parallel out

Made by: Waqar Siddhu

Question No : 31 of 52

Marks: 1 (Budgeted Time 1 Min)

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2

4

8

16

correct

Made by: Waqar Siddhu

Question No : 32 of 52

Marks: 1 (Budgeted Time 1 Min)

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit **correct**

Nibble

Byte

Word

Made by: Waqar Siddhu

Question No : 33 of 52

Marks: 1 (Budgeted Time 1 Min)

The _____ of a ROM is the time it takes for the data to appear at the Data Output of the ROM chip after an address is applied at the address input lines

Answer (Please select your correct option)

VuAnswers.com

Write Time

Refresh Time

Refresh Time

Access Time

correct

Made by: Waqar Siddhu

Question No : 34 of 52

Marks: 1 (Budgeted Time 1 Min)

In _____, all the columns in the same row are either read or written.

Answer (Please select your correct option)

VuAnswers.com

Sequential Access

MOS Access

FAST Mode Page Access

None of given options

correct

Made by: Waqar Siddhu

Question No : 35 of 52

Marks: 1 (Budgeted Time 1 Min)

FIFO is an acronym for _____

Answer (Please select your correct option)

VuAnswers.com

First In, First Out

correct

Fly in, Fly Out

Fast in, Fast Out

None of given options

Made by: Waqar Siddhu

Question No : 36 of 52

Marks: 1 (Budgeted Time 1 Min)

If the FIFO Memory output is already filled with data then _____

Answer (Please select your correct option)

VuAnswers.com

- It is locked; no data is allowed to enter
- It is not locked; the new data overwrites the previous data.
- Previous data is swapped out of memory and new data enters
- None of given options

correct

Made by: Waqar Siddhu

Question No : 37 of 52

Marks: 1 (Budgeted Time 1 Min)

Stack is a _____

Answer (Please select your correct option)

VuAnswers.com

Bust Flash Memory

FIFO memory

LIFO memory

Flash Memory

correct

Made by: Waqar Siddhu

Question No : 38 of 52

Marks: 1 (Budgeted Time 1 Min)

A flash A/D converter uses :

Answer (Please select your correct option)

VuAnswers.com

Counters

correct

not sure

Flip-flops

Op-amps

An integrator

Made by: Waqar Siddhu

Question No : 39 of 52

Marks: 1 (Budgeted Time 1 Min)

LUT is an acronym for _____

Answer (Please select your correct option)

VuAnswers.com

Look Up Table

correct

Local User Terminal

Least Upper Time Period

None of given options

Made by: Waqar Siddhu

Question No : 40 of 52

Marks: 1 (Budgeted Time 1 Min)

According to the sampling theorem, the sampling frequency should be :

Answer (Please select your correct option)

VuAnswers.com

- Greater than the lowest signal frequency
- Less than half the lowest signal frequency
- Greater than twice the highest signal frequency
- Less than half the highest signal frequency

correct

Made by: Waqar Siddhu

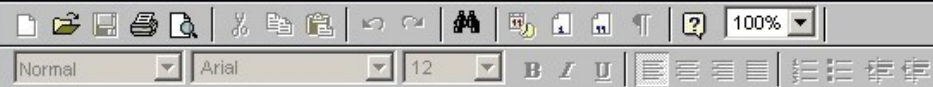
Question No : 41 of 52

Marks: 2 (Budgeted Time 4 Min)

Divide binary number "1101" by binary number "101", write down all the steps.

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

VuAnswers.com



Made by: Waqar Siddhu

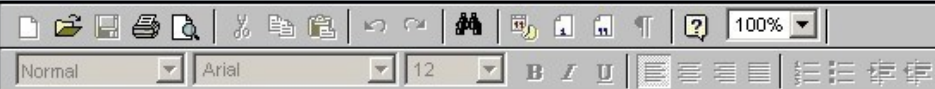
Question No : 42 of 52

Marks: 2 (Budgeted Time 4 Min)

Name the single change which can be made to convert a combinational circuit to a sequential circuit?

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

VuAnswers.com



Made by: Waqar Siddhu

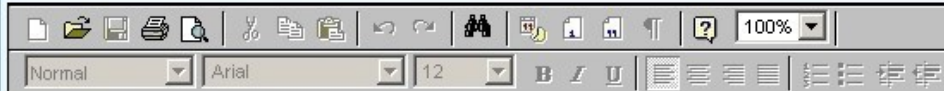
Question No : 43 of 52

Marks: 2 (Budgeted Time 4 Min)

Write down the names of two basic operations which are performed on memory?

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

VuAnswers.com



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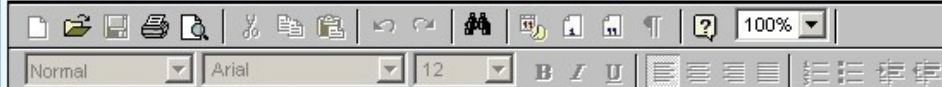
Question No : 44 of 52

Marks: 2 (Budgeted Time 4 Min)

What is the function of row and column decoders?

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

VuAnswers.com



Large memories such as the 16 KB memory have row and column decoders that split the input address into a row address and a column address and activate a row and column select lines respectively.

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Question No : 45 of 52

Marks: 3 (Budgeted Time 6 Min)

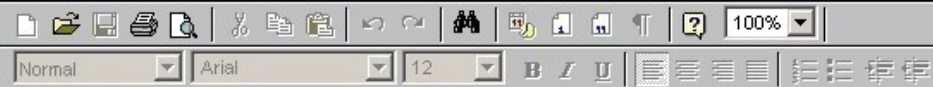
Following two waves are applied at 2-input AND gate, Draw the output waveform of this gate.

A 0 1 0 1 0 1 0 1 0

B 0 0 1 1 0 0 1 1 0

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

VuAnswers.com

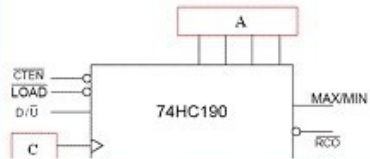


Made by: Waqar Siddhu

Question No : 46 of 52

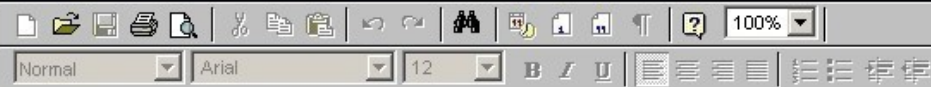
Marks: 3 (Budgeted Time 6 Min)

You are given the block diagram of 74HC190 integrated circuit of 4-bit synchronous up/down counter, Name the pins which are under red boxes.



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

VuAnswers.com



Made by: Waqar Siddhu

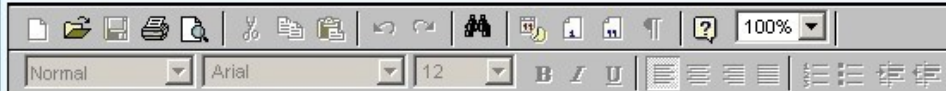
Question No : 47 of 52

Marks: 3 (Budgeted Time 6 Min)

Write down three characteristics of serial in / serial out 4-bit left shift register.

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

VuAnswers.com



Made by: Waqar Siddhu

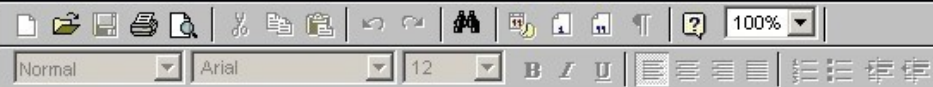
Question No : 48 of 52

Marks: 3 (Budgeted Time 6 Min)

Draw the circuit diagram of operational amplifier used as an inverting amplifier.

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

VuAnswers.com



Made by: Waqar Siddhu

Question No : 49 of 52

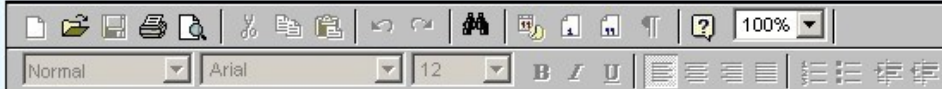
Marks: 5 (Budgeted Time 10 Min)

Convert the following Boolean expression into standard SOP form:

$$A\bar{B}C + \bar{A}\bar{B} + AB\bar{C}D$$

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

VuAnswers.com



Made by: Waqar Siddhu

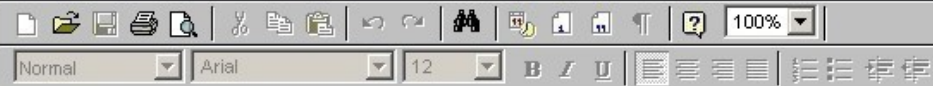
Question No : 50 of 52

Marks: 5 (Budgeted Time 10 Min)

Draw the next-state table of a 3-bit Up Counter.

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

VuAnswers.com



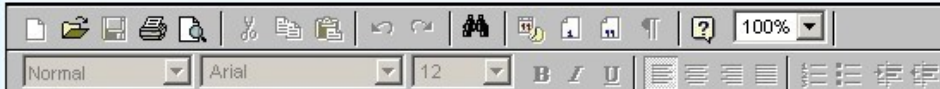
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Draw a complete test vector table for a 3-bit up/down counter using the following information.

- X is excitation input (if $X=0$, counter counts upward and vice versa).
- When the Clear input is 0 the output is cleared to 000 irrespective of the X.
- When the Clear input is set to 1 counter functions normally.
- Clear, Clock and X are inputs for up-down counter.

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

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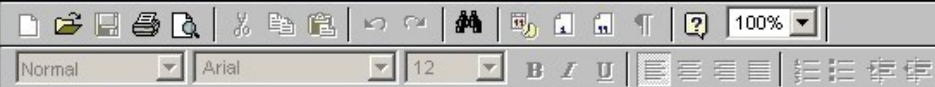
Question No : 52 of 52

Marks: 5 (Budgeted Time 10 Min)

Analog to Digital converters exhibit different types of errors during their conversion operation. Explain at least two.

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

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