



DOWNLOAD SOLVED FINAL

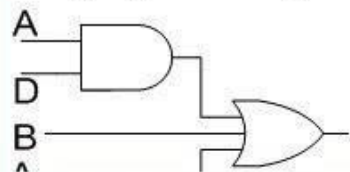
PAST PAPERS BY WAQAR SIDDHU

More in PDF From

VU Answer

Get All Solutions.

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

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

Answer (Please select your correct option)

VuAnswers.com

0011

1100

1000

1010

correct

Made by: Waqar Siddhu

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

VuAnswers.com

Answer (Please select your correct option)

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

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

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

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

Made by: Waqar Siddhu

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

n -to- 2^{n-1}

correct

Made by: Waqar Siddhu

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

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

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

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

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

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

1011 – 101 = _____

Note: both values are in binary

VuAnswers.com

Answer (Please select your correct option)

1100

0110

0011

1001

correct

Made by: Waqar Siddhu

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

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



correct

3



Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

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

_____ Flip-flops are obsolete now.

Answer (Please select your correct option)

VuAnswers.com

Edge-triggered

Master-Slave

T-Flip-flop

D-Flip-flop

correct

Made by: Waqar Siddhu

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

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)

correct

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

Made by: Waqar Siddhu

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

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

Answer (Please select your correct option)

VuAnswers.com

correct

Moore Machine

Mealy Machine

Counter

Flip Flop

Made by: Waqar Siddhu

A GAL is essentially a _____.

Answer (Please select your correct option)

VuAnswers.com

Non-reprogrammable PAL

PAL that is programmed only by the manufacturer

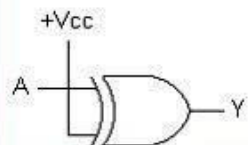
Reprogrammable PAL

correct

Reprogrammable PAL

Made by: Waqar Siddhu

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

0

A

correct

\bar{A}

Made by: Waqar Siddhu

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

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2

4

correct

8

16

Made by: Waqar Siddhu

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit



correct

Nibble



Byte



Word



Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

Caveman number system is Base _____ number system

Answer (Please select your correct option)

VuAnswers.com

2

5

10

16

correct

Made by: Waqar Siddhu

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

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

"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

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

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

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

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

correct

Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

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

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

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)

2^n (2 raise to power n)

n^2 (n raise to power 2)

correct

Made by: Waqar Siddhu

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

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

correct

Made by: Waqar Siddhu

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

correct

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

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

Pulse Interval time

correct

Made by: Waqar Siddhu

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

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

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

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

_____ 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

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

Parallel in / Parallel out shift register

Serial in / Serial Out shift register

correct

Made by: Waqar Siddhu

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

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

correct

Reprogrammable PAL

Made by: Waqar Siddhu

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

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

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2

4

8

16

correct

Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

Excess-8 code assigns _____ to "-8"

Answer (Please select your correct option)

VuAnswers.com

1110

1100

1000

0000

correct

Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

2's complement of -5 is _____

Answer (Please select your correct option)

VuAnswers.com

1000

1011

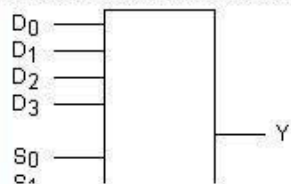
1100

1110

correct

Made by: Waqar Siddhu

The device shown here is most likely a _____



Answer (Please select your correct option)

VuAnswers.com

Comparator

Multiplexer

Demultiplexer

Parity generator

correct

Made by: Waqar Siddhu

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

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



_____ counters as the name indicates are not triggered simultaneously.

Answer (Please select your correct option)

VuAnswers.com

Synchronous

Asynchronous

Positive-Edge triggered

Negative-Edge triggered

correct

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

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

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

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

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

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

Hold time

Pulse Interval time

correct

Made by: Waqar Siddhu

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

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

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

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



_____ 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

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

Answer (Please select your correct option)

VuAnswers.com

State diagram

Next state table

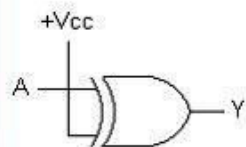
State reduction

State assignment

correct

Made by: Waqar Siddhu

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

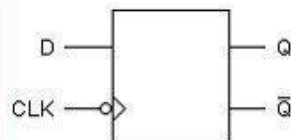
0

A

correct

\bar{A}

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

correct

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

Made by: Waqar Siddhu

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

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

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

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit



correct

Nibble



Byte



Word



Made by: Waqar Siddhu

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

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

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

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

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

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



_____ 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

Quantization

Missing Code

correct

Made by: Waqar Siddhu

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

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

"A + B = B + A" is _____

VuAnswers.com

Answer (Please select your correct option)

Demorgan's Law

Distributive Law

Commutative Law

Associative Law

correct

Made by: Waqar Siddhu

_____ 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

16

correct

Made by: Waqar Siddhu

The _____ Encoder is used as a keypad encoder.

VuAnswers.com

Answer (Please select your correct option)

2-to-8 encoder

4-to-16 encoder

BCD-to-Decimal

Decimal-to-BCD Priority

correct

Made by: Waqar Siddhu

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

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

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

correct

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

Made by: Waqar Siddhu

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

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

64-bits

correct

Made by: Waqar Siddhu

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

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

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

VuAnswers.com

Answer (Please select your correct option)

SET

RESET

Invalid

No change

correct

not sure

Made by: Waqar Siddhu

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

VuAnswers.com

Answer (Please select your correct option)

Set

Reset

Toggle

Invalid

correct

Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

Invalid

Input is invalid

correct

Made by: Waqar Siddhu

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

VuAnswers.com

Answer (Please select your correct option)

0

1

$Q(t)$

Invalid

Made by: Waqar Siddhu

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

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**

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

VuAnswers.com

Answer (Please select your correct option)

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

RCO Stands for _____

VuAnswers.com

Answer (Please select your correct option)

Reconfiguration Counter Output

Reconfiguration Clock Output

Ripple Counter Output

Ripple Clock Output

correct **Made by: Waqar Siddhu**

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

VuAnswers.com

Answer (Please select your correct option)

10 Hz

50 Hz

100 Hz

500 Hz

correct

Made by: Waqar Siddhu

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

Parallel in / Parallel out shift register

Serial in / Serial Out shift register

correct

Made by: Waqar Siddhu

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

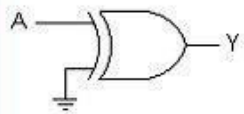
Remains in previous state

State of transmission line is not used to start transmission

correct

Made by: Waqar Siddhu

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

C

0

C

A

C

correct

\bar{A}

C

Made by: Waqar Siddhu

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

A Nibble consists of _____ bits

Answer (Please select your correct option)

VuAnswers.com

2

4

8

16

correct

Made by: Waqar Siddhu

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

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

VuAnswers.com

Answer (Please select your correct option)

Sequential Access

MOS Access

FAST Mode Page Access

None of given options

correct

Made by: Waqar Siddhu

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

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

VuAnswers.com

Answer (Please select your correct option)

Strobing

Amplification

Quantization

Digitization

correct

Made by: Waqar Siddhu

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

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

_____ 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

Quantization

Missing Code

correct

Made by: Waqar Siddhu

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

Caveman number system is Base _____ number system

VuAnswers.com

Answer (Please select your correct option)

2

5

10

16

correct

Made by: Waqar Siddhu

110 / 10 = _____

Note: both values are in binary

VuAnswers.com

Answer (Please select your correct option)

11

correct

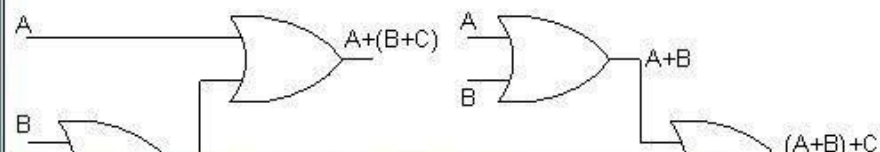
10

111

101

Made by: Waqar Siddhu

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

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

VuAnswers.com

Answer (Please select your correct option)

A

B

A.B

A+B

correct

Made by: Waqar Siddhu

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

VuAnswers.com

Answer (Please select your correct option)

Product of sum form

Sum of product form

Demorgans law

Associative law

correct

Made by: Waqar Siddhu

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

correct

Sum

Product

Min

Composite

Made by: Waqar Siddhu

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

Answer (Please select your correct option)

VuAnswers.com

correct

ENP, ENT

ENI, ENC

ENP, ENC

ENT, ENI

Made by: Waqar Siddhu

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

correct

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

Made by: Waqar Siddhu

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

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

When $\text{PRE}' = 0$ and $\text{CLR}' = 1$, $Q_t = 0$ then $Q_{(t+1)}$ will be _____

Answer (Please select your correct option)

VuAnswers.com

Output of flip-flop will be set (Logic 1)

correct

Output of flip-flop will be reset (Logic 0)

Output of flip-flop will be invalid

Flip-flop will change output on Clock transition

Made by: Waqar Siddhu

Compared to analog systems, digital systems _____.

Answer (Please select your correct option)

VuAnswers.com

are less prone to noise

correct

not sure

can represent an infinite number of values

can handle much higher power

occupy large space

Made by: Waqar Siddhu

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



correct

3



Made by: Waqar Siddhu

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

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

VuAnswers.com

Answer (Please select your correct option)

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

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

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

correct

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)

Made by: Waqar Siddhu

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

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

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

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

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

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

correct

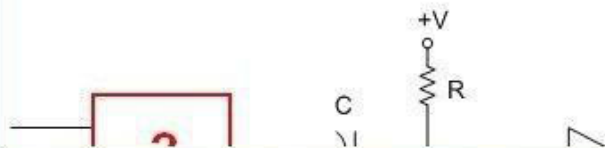
Sets to clear when both $J = 0$ and $K = 0$

It does not show transition on change in pulse

It does not accept asynchronous inputs

Made by: Waqar Siddhu

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

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

64 mW

84 mW

correct

Made by: Waqar Siddhu

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

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

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

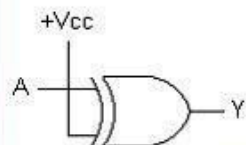


State of transmission line is not used to start transmission.

correct

Made by: Waqar Siddhu

The output of this circuit is always _____.



Answer (Please select your correct option)

VuAnswers.com

1

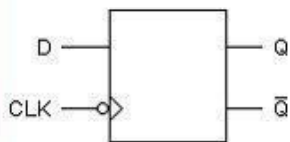
0

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

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

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

Smallest unit of binary data is a _____

Answer (Please select your correct option)

VuAnswers.com

Bit



correct

Nibble



Byte



Word



Made by: Waqar Siddhu

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

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

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

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

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

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

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

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

MORE PAST PAPERS BY WAQAR SIDDHU

Provide Solved in PDF Get From

VU Answer

Get All Solutions.

