CIT292

In Boolean algebra, the OR operation is performed by \_\_\_\_ properties

All of the options

Which of the following represents DeMorgan’s theorem?

(AB)’ = A’ + B’

A Karnaugh map (K-map) is an abstract form of \_\_\_\_\_\_\_\_\_\_\_\_ diagram organized as a matrix of squares.

Venn

A product term containing all K variables of the function in either complemented or uncomplemented form is called a \_\_\_\_\_.

Minterm

Canonical form is a unique way of representing\_\_\_\_\_\_\_

Boolean expressions

A full adder logic circuit has \_\_\_\_\_\_.

Three inputs and two outputs

Exclusive-OR (XOR) logic gates can be constructed from which of the following logic gates?

AND gates, OR gates, and NOT gates

The \_\_\_\_\_ function can be used to enable.

AND

Boolean algebra is also called \_\_\_\_\_

Switching algebra

First operator precedence for evaluating Boolean expressions is \_\_\_\_

( )

In a \_\_\_\_ counter all the Flip-flops will change states simultaneously

parallel

Any Boolean function can be represented in a

Truth table

In D flip-flop, if clock input is LOW, the D input

Goes high

Which of the following expression depicts complement of the expression A’B + CD’ ?

(A + B’)(C’ + D)

The Octal to binary conversion of 248 = ?

1111002

A Boolean function is said to be in a \_\_\_\_\_ form if a sum-of-products expression or a product-of-sums expression has at least one term that is NOT a minterm or a maxterms respectively

standard

Odd parity of word can be conveniently tested by \_\_\_ gate.

XOR

The code where all successive numbers differ from their preceding number by single bit is \_\_\_.

Excess 3

\_\_\_\_\_\_ circuit is generated from D flip-flop due to the addition of an inverter by causing reduction in the number of inputs.

Gated D-latch

How many types of sequential circuits do we have?

2

In a NAND based S’-R’ latch, if S’=1 and R’=1 then the state of the latch is:

No change

Boolean algebra is an algebraic structure with \_\_\_\_\_ arithmetic operations

Two

\_\_\_\_ is an odd function

Exclusive-OR

X+0=0+x =x is an example of \_\_\_ property

Commutative

Which of the following is not one of the arithmetic operations of Boolean algebra?

subtraction

Which of the following logic families has the shortest propagation delay?

AS-TTL

A Boolean function can be converted from algebraic expressions to a product of maxterms by using \_\_\_\_

Canonical Conversion Method

LED seven-segment display uses seven individual -----------

Light emitting diodes

Which of the following combinational circuits is renowned for selecting a single input from multiple inputs and directing the binary information to output line?

Data Selector

Minterms are also referred to as Standard \_\_\_\_\_\_\_\_

product

The gates required to build a half adder are \_\_\_\_.

EX-OR gate and AND gate

A universal logic gate is one which can be used to generate any logic function. Which of the following is a universal logic gate?

NAND

The difference between half adder and full adder is that

Half adder has two inputs while full adder has three inputs

\_\_\_\_\_\_\_\_ is the process involved in recording music or any audio in a recorder.

Encoding

A variable on its own or in its complemented form is known as a \_\_\_\_\_\_\_\_

Literal

Using the transformation method you can realize any POS realization of OR-AND with only \_\_\_\_

\*NOR\*

Code is a symbolic representation of \_\_\_\_\_\_\_\_\_\_ information.

\*Discrete\*

A three-digit decimal number requires \_\_\_\_ number of bits for representation in the conventional BCD format.

\*12\*

An encoder can be a transducer. TRUE or FALSE?

\*TRUE\*

The process of representing numbers, letters or words by a special group of symbols is called \_\_\_\_\_\_\_\_\_

\*Encoding\*

The bistable element has \_\_\_\_ symmetrical nodes

\*two\*

The action of clearing a Flip-Flop is also called \_\_\_\_.

\*resetting\*

To perform product of maxterms, Boolean function must be brought into \_\_\_\_ terms.

\*OR\*

A Boolean function may be transformed into \_\_\_\_\_\_\_ diagram

\*logical\*

Boolean algebra is defined as a set of Two \_\_\_\_\_\_

\*values\*

A helpful illustration used to visualize relationships among variables of Boolean expression is \_\_\_\_\_\_ diagram

\*Venn\*

NAND is a complement of \_\_\_\_\_

\*AND\*

Inverter circuit inverts logic sense of \_\_\_\_\_\_\_ variable

\*Boolean\*

+ symbol represents \_\_\_\_ operation

\*OR\*

Truth table is way of expressing \_\_\_\_\_\_\_\_ function

\*Boolean\*

Symbol representing AND operation is \_\_\_\_\_

.

In the equation a\*b=c, \* is the binary \_\_\_\_\_\_\_

\*operator\*

Complement of function F is written as \_\_\_\_\_\_

\*F’\*

The D flip-flop has \_\_\_\_\_\_\_ input.

\*1\*

The truth table for an S-R flip-flop has how many VALID entries?

\*3\*

(X')' is a \_\_\_\_\_\_\_ complement

\*dual\*

In D flip-flop, D stands for \_\_\_\_\_\_

\*Delay\*

The D flip-flop has how many output?.

\*2\*

In \_\_\_\_ systems, the outputs of logic circuits can change state any time that one or more of the inputs change.

\*asynchronous\*

At every active edge of the clock, the \_\_\_ flip-flop will load in a new value.

\*D\*

The characteristic of J-K flip-flop is similar to \_\_\_\_\_ flip-flop

\*S-R\*

NOR is a complement of

\*OR\*

It is not possible to find two algebraic expressions that specify same function? TRUE or FALSE?

\*FALSE\*

An encoder can be referred to as multiplexer. TRUE or FALSE?

\*TRUE\*

A J-K flip-flop is said to have \_\_\_\_\_, if J=1, K=1.

\*toggle\*

Boolean algebra is collection of objects having \_\_\_\_\_\_ properties.

\*Common\*

According to Boolean algebra Involution law, (Y')' = \_\_\_\_

\*Y\*

In parts of the processor, \_\_\_\_\_\_\_are used to calculate Addresses, Table indices, and increment or decrement operators

\*adders\*

\_\_\_\_\_ subtractor is used to perform subtraction of 3 bits

\*Full\*

A single \_\_\_\_\_\_\_ can be used to build the ‘NOT’ digital logic gates

\*transistor\*