

Professional Online Academy Vu Topper RM



CS302-Digital Logic Design Update MCQ'S Mid Term



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Question No:1

(Marks:1)

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Boolean Multiplication operation is performed by a(n) _____ gate.

A. NAND

B. AND

C. OR

D. XOR

Question No:2

(Marks:1)

Vu-Topper RM

In the Repeated-Division method, the Decimal number to be converted is divided by the _____.

A. Base number

B. Maximum range value of target number system

C. 2

D. Minimum range value of target number system

Question No:3

(Marks:1)

Vu-Topper RM

Caveman used a number system that has _____ distinct shapes:

A. 5

B. 6

C. 7

D. 4

Question No:4

(Marks:1)

Vu-Topper RM

Power dissipation of _____ devices remains constant throughout their operation.

A. CMOS

B. Peripheral

C. TTL

D. Storage

Question No:5

(Marks:1)

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Digital Systems are based on the _____ system.

A. Hexadecimal Number

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B. Caveman Number

C. Binary Number

D. Decimal Number

Question No:6

(Marks:1)

Vu-Topper RM

The expression $F=A+B+C$ describes the operation of three bits _____ Gate.

A. AND

B. NOT

C. OR

D. NAND

Question No:7

(Marks:1)

Vu-Topper RM

The Quine-McCluskey method has _____ number of steps.

A. 2 **Page 111**

B. 4

C. 5

D. 3

Question No:8

(Marks:1)

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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.

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

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

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

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

Question No:9

(Marks:1)

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The simplified expression is presented in a _____ format.

A. Truth Table

B. Logic Table

C. Function Table

D. Data Table

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Question No:10

(Marks:1)

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1010 – 0101 = _____

- A. 1000
- B. 0010
- C. 0101**
- D. 1010

Question No:11

(Marks:1)

Vu-Topper RM

Sign magnitude can represent _____.

- A. Negative numbers
- B. Natural numbers
- C. Both negative and positive numbers**
- D. Positive Numbers

Question No:12

(Marks:1)

Vu-Topper RM

What is the value of the output of the addition of following binary numbers?

1011 + 1110

- A. 11001**
- B. 1101
- C. 1001
- D. 1000

Question No:13

(Marks:1)

Vu-Topper RM

Inputs Output

A B F

0 0 0

0 1 1

1 0 1

1 1 0

- A. NOT
- B. AND

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- C. OR
D. XOR

Question No:14 (Marks:1) **Vu-Topper RM**
The ANSI/IEEE Standard 754 defines a _____ Single-Precision Floating Point format for binary numbers.

- A. 8-bit
B. 16-bit
C. 64-bit
D. 32-bit

Question No:15 (Marks:1) **Vu-Topper RM**
Don't care conditions are marked as _____ in the output column of the function table

- A. X** **Page 97**
B. A
C. 0
D. 1

Question No:16 (Marks:1) **Vu-Topper RM**
For a 3-to-8 decoder how many 2-to-4 decoders will be required?

- A. 4
B. 3
C. 1
D. 2

Question No:17 (Marks:1) **Vu-Topper RM**
Which of the following 4-bit ALU has five function select inputs?

- A. 74XX381
B. 74XX382
C. 74XX182
D. 74XX181

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Question No:18 (Marks:1) **Vu-Topper RM**
Combinational Logic is used for combinational circuits, where as Registered Logic is based on _____ circuits.

- A. Single
- B. Multiple
- C. Sequential**
- D. Consecutive

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Question No:19 (Marks:1) **Vu-Topper RM**
A source file that is created in ABEL has _____ sections.

- A. two
- B. three**
- C. four
- D. five

Question No:20 (Marks:1) **Vu-Topper RM**
Consider 7-segment display and write which segments will be ON for digit 1.

- A. b,c,d
- B. a,b,c
- C. b, c**
- D. a, b

Question No:21 (Marks:1) **Vu-Topper RM**
When two or more product terms are summed by Boolean addition, the result is a _____ expression.

- A. SOP**
- B. POS
- C. Boolean
- D. Simplified

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Question No:22 (Marks:1) **Vu-Topper RM**
How many maximum group can be generated in 3 variable K map ?

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- A. 8
- B. 6
- C. 3
- D.9

Question No:23 (Marks:1) **Vu-Topper RM**
_____ part of logic gate identifies the switching speed of gate.

- A. 74
- B. xx
- C. 00
- D.54

Question No:24 (Marks:1) **Vu-Topper RM**
The output of an AND gate is one when _____

- A. Any of the input is one
- B. Any of the input is zero
- C. All the inputs are zero
- D. All of the inputs are one

Question No:25 (Marks:1) **Vu-Topper RM**
Rules of Boolean algebra can be proved by replacing the literals with Boolean value(s)_____.

- A. Only 0
- B. 0 and 1
- C. 0 or 1
- D. Only 1

Question No:26 (Marks:1) **Vu-Topper RM**
Power consumption in TTL is _____ as compared to CMOS.

- A. Higher
- B. Less
- C. Different

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D. Equal

Question No:27

(Marks:1)

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In the expression $F = A \oplus B$, the \oplus represents _____ logical operator.

A. OR

B. XOR

C. AND

D. NAND

Question No:28

(Marks:1)

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_____ integrated circuit technology can easily be damaged due to accumulated static charge.

A. ECL

B. PMOS

C. TTL

D. CMOS

Question No:29

(Marks:1)

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_____ is an essential part of sequential circuit.

A. JK Flip Flop

B. Clock

C. Memory Element

D. Multiplexers

Question No:30

(Marks:1)

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How many maximum group can be generated in 4 variable K map?

A. 16

B. 12

C. 8

D. 4

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Question No:31

(Marks:1)

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The PLDs are implemented having a general purpose structure based on _____ arrays.

- A. OR-XOR
- B. XOR-NOR
- C. AND-OR**
- D. AND-NAND

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Question No:32

(Marks:1)

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Suppose we want to transmit the data "10001101", and an "Even-Parity" bit scheme is used to detect errors, the parity bit added to this data will be _____

- A. Both "0" and "1" can be used
- B. Parity bit is not needed in this case.
- C. "0"
- D. "1"**

Question No:33

(Marks:1)

Vu-Topper RM

On a Karnaugh map, grouping the 0s produces

- A. a SOP expression**
- B. a "don't care" condition
- C. AND-OR logic
- D. a POS expression

Question No:34

(Marks:1)

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A logic circuit that determines if one input is equal to another is called a _____.

- A. Comparator**
- B. Encoder
- C. Multiplexer
- D. Adder

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Question No:35

(Marks:1)

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A _____ can not operate without a memory element.

- A. Cell
- B. Unit
- C. Clock

D. Counter

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Question No:36

(Marks:1)

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Boolean algebra is the _____ of Digital Systems.

- A. Science
- B. Equation
- C. Expression

D. Mathematics

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Question No:37

(Marks:1)

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A logic circuit for the expression $X = A'B + AB'$ can be implemented using _____.

- A. three AND gates, two OR gates, one inverter
- B. two AND gates, two OR gates, two inverters

C. two AND gates, one OR gate, two inverters

D. two AND gates, one OR gate

Question No:38

(Marks:1)

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In K-map simplification method, a group of four adjacent 1's lead to a term with _____.

A. Three literals less than the total number of variables

B. Two literals less than the total number of variables

C. One literal less than the total number of variables

D. Four literals less than the total number of variables

Question No:39

(Marks:1)

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The 4-variable Karnaugh Map (K-Map) has _____ cells for min or max terms

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- A. 12
- B. 16**
- C. 4
- D. 8

Question No:40 (Marks:1)

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In look ahead circuits P stands for _____.

- A. Carry generate.
- B. Carry propagate.**
- C. Carry input.
- D. Propagation delay.

Question No:41 (Marks:1)

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The OLMC can be configured to provide a feedback input signal to the AND gate array input. There are _____ possibilities.

- A. Two
- B. Five
- C. Four
- D. Three**

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Question No:42 (Marks:1)

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The problem of excessive delays caused by carry propagation can be reduced by a _____ circuit.

- A. Carry Look Ahead**
- B. Full Adder
- C. Ripple Carry Adder
- D. Half Adder

Question No:43 (Marks:1)

Vu-Topper RM

Half-Adder Logic circuit contains _____ XOR Gates.

- A. 0
- B. 3
- C. 1**

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D.2

Question No:44

(Marks:1)

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_____ is the example of Commutative Law for Multiplication

- A. $A+B=B+A$
- B. $A(B+C) = B(A+C)$
- C. $AB=BA$**
- D. $AB+C = A+BC$

Question No:45

(Marks:1)

Vu-Topper RM

The OLMC of the GAL16V8 is similar to the OLMC of the _____ with some enhancements.

- A. GAL14V10
- B. GAL22V10**
- C. GAL12V10
- D. GAL16V10

Question No:46

(Marks:1)

Vu-Topper RM

Multiplexers can be interpreted as _____.

- A. Many-to-One**
- B. Many-to-Many
- C. One-to-One
- D. One-to-Many

Question No:47

(Marks:1)

Vu-Topper RM

In Complex mode of GAL16V8, OLMCs can be configured in _____ ways.

- A. 5
- B. 4**
- C. 2
- D. 3

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Question No:48

(Marks:1)

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In GAL16V8, each product term is implemented using a 32-bit input _____ gate.

- A. XOR
- B. OR
- C. NAND
- D. AND**

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Question No:49

(Marks:1)

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The sum terms in Standard POS form are called _____

- A. Maxterms**
- B. Mixterms
- C. Midterms
- D. Minterms

Question No:50

(Marks:1)

Vu-Topper RM

_____ versions of logic gates are designed to withstand harsh and severe environmental conditions.

- A. Business
- B. Commercial
- C. Military**
- D. Domestic

Question No:51

(Marks:1)

Vu-Topper RM

The boolean expression $A + BC$ equals

- A. $(A' + B)(A' + C)$
- B. $(A + B')(A + C')$
- C. $(A + B)(A + C)$**
- D. $(A + B)(A' + C)$

Question No:52

(Marks:1)

Vu-Topper RM

The Boolean expression $(A + B' + C)$ is

- A. a sumterm**

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- B. a maxterm
- C. a literal term
- D. a product term

Question No:53 (Marks:1) **Vu-Topper RM**

A _____ is converted into a standard POS by using the rule $AA\bar{A} = 0$.

- A. Non-standard SOP
- B. Simplified SOP
- C. Simplified POS
- D. Non-standard POS**

Question No:54 (Marks:1) **Vu-Topper RM**

_____ function tables are required to represent the input/output combinations for each segment in 7-segment display.

- A. One
- B. Two
- C. Five

D. Seven Page 104

Question No:55 (Marks:1) **Vu-Topper RM**

Decimal number system is Base _____ number system

- A. 5
- B. 2
- C. 10**
- D. 16

Question No:56 (Marks:1) **Vu-Topper RM**

NOT gate is also known as an _____.

- A. Inverter circuit** Google
- B. Switch circuit
- C. Both
- D. None

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Question No:57 (Marks:1)

Vu-Topper RM

A variable can have a _____ value.

A. 0 or 1 value Page 71

B. 0 or 0 value

C. 1 or 0 value

D. 0 and 1 value

Question No:58 (Marks:1)

Vu-Topper RM

_____ come in different configurations they are identified by unique number

A. PALs Page 186

B. PLAS

C. DALs

D. ADLS

Question No:59 (Marks:1)

Vu-Topper RM

Arithmetic and Logic Units can perform any of the arithmetic operations and logic operations on _____ input values.

A. One

B. Two Page 147

C. Four

D. Three

Question No:60 (Marks:1)

Vu-Topper RM

When the error condition is not detected in BCD adder, the circuit output is 0 and the 2nd Adder input B is set to _____.

A. 0000 Page 142

B. 1111

C. 0011

D. 1100

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Question No:61

(Marks:1)

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A _____ attached to the Select inputs of the Demultiplexer routes the incoming serial bits to successive outputs where each bit is stored.

- A. Data
- B. Buffer
- C. Memory

D. Counter **Page 178**

Question No:62

(Marks:1)

Vu-Topper RM

The _____ allows both its AND Gate array and the OR gate array to be programmed independently.

- A. PLA**
- B. DLA
- C. GAL
- D. EPROM

Page 188

Question No:63

(Marks:1)

Vu-Topper RM

In 16-bit ALU, the Carry outputs C1, C2 and C3 from the Look-Ahead Carry generator circuit are generated after a gate delay of _____.

- A. 2**
- B. 4
- C. 3
- D. 1

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Question No:64

(Marks:1)

Vu-Topper RM

The GAL16V8 has eight _____ each connected to eight product terms.

- A. OLMCs**
- B. POS
- C. SOP
- D. CELLS

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Question No:65

(Marks:1)

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A circuit that converts the n inputs to 2^n outputs is called _____.

A. Decoder **Google**

B. Shifter

C. Encoder

D. Comparator

Question No:66

(Marks:1)

Vu-Topper RM

The Decimal-to-BCD Encoder has _____ outputs

A. Two

B. Ten

C. Four **Page 166**

D. Five

Question No:67

(Marks:1)

Vu-Topper RM

In a Digital System, Binary data is used and represented in _____.

A. Static

B. Serial

C. Variable

D. Parallel **Page 175**

Question No:68

(Marks:1)

Vu-Topper RM

In look ahead circuits G stands for _____.

A. Carry Input

B. Carry Output

C. Carry Propagate

D. Carry Generator **Page 150 and 151**

Question No:69

(Marks:1)

Vu-Topper RM

When the fuse of the _____ gate input is blown to set the input to logic high, the output of the XOR gate is opposite of the OR gate output.

A. OR

B. XOR **Page 186**

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- C. AND
- D. NAND

Question No:70 (Marks:1) **Vu-Topper RM**
Combinational Logic is used for combinational circuits, where as Registered Logic is based on _____ circuits.

- A. 4 Wire** **Page 194**
- B. 3 Wire
- C. 2 Wire
- D. 1 Wire

Question No:71 (Marks:1) **Vu-Topper RM**
The 4-bit ALU (74XX381) only has three function select inputs allowing only _____ different arithmetic and logic functions.

- A. 8** **Page 147** **ok**
- B. 16
- C. 4
- D. 2

Question No:72 (Marks:1) **Vu-Topper RM**
The PROM consists of a fixed non-programmable _____ Gate array configured as a decoder.

- A. OR
- B. AND** **Page 182**
- C. XOR
- D. NAND

Question No:73 (Marks:1) **Vu-Topper RM**
The simplified expressions using either of the two K-maps are

- _____.
- A. Logical
- B. Physical
- C. Identical** **Page 89**

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D. None of these

Question No:74

(Marks:1)

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The _____ gate and _____ gate implementation connected at the B input of the 4-bit Adder is used to allow Complemented or Un-Complemented B input to be connected to the Adder input.

A. AND and OR

Page 146

B. XOR and And

C. NOT and OR

D. NAND and XOR

Question No:75

(Marks:1)

Vu-Topper RM

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

A. 12

Google

B. 2

C. 8

D. 16

Question No:76

(Marks:1)

Vu-Topper RM

When the control line in tri-state buffer is high, the buffer operates like a _____ gate

A. OR

B. AND

C. NOT

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D. XOR

Question No:77

(Marks:1)

Vu-Topper RM

How many sets of AND-OR based circuit are used to allow complemented and un-complemented B input to be applied at the B inputs of the two 4-bit Adders?

A. One

B. Two

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- C. Five
- D. Four

Question No:78

(Marks:1)

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The product terms in Standard SOP are called _____

A. Minterms

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- B. Minimum
- C. Maximum
- D. Manterms

Question No:79

(Marks:1)

Vu-Topper RM

In 8-input multiplexer, when ___ is set to 0, the first multiplexer is selected allowing its inputs 1C0, 1C1, 1C2 and 1C3 to be selected.

- A. B
- B. C
- C. D
- D. A

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Question No:80

(Marks:1)

Vu-Topper RM

A Karnaugh Map is organized in the form of a(an) _____.

- A. Array
- B. Method
- C. Function
- D. Data Type

Page 89

Question No:81

(Marks:1)

Vu-Topper RM

The _____ Gate is used in circuits to generate the 1's Complement of a number by inverting all its bits.

- A. OR
- B. AND
- C. NOT
- D. XOR

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Question No:82

(Marks:1)

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The OR Gate performs a Boolean _____ function

A. Addition

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B. Subtraction

C. Both

D. None of these

Question No:83

(Marks:1)

Vu-Topper RM

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

A. Sum Page 85

B. Min

C. Product

D. Composite

Question No:84

(Marks:1)

Vu-Topper RM

The 4-bit 2's complement representation of "-7" is _____

A. 1001 Page 23

B. 0011

C. 0010

D. 1111

Question No:85

(Marks:1)

Vu-Topper RM

The AND Gate performs a logical _____ function

A. Multiplication

Page 40

B. Different

C. None

D. Both

Question No:86

(Marks:1)

Vu-Topper RM

The Adjacent 1s Detector accepts 4-bit inputs. If ____ adjacent 1s are detected in the input, the output is set to high.

A. 1

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B. 2 **Page 123**

C. 3

D. 4

Question No:87 **(Marks:1)** **Vu-Topper RM**
In 16-input multiplexer, the decoder inputs _____ and _____ enable one out of the four multiplexers.

A. C and D **Page 171**

B. A and B

C. B and A

D. A and D

Question No:88 **(Marks:1)** **Vu-Topper RM**
8-bit parallel data can be converted into serial data by using _____ multiplexer.

A. 8-to-1 **Page 175**

B. 4-to-2

C. 8-to-4

D. 4-to-4

Question No:89 **(Marks:1)** **Vu-Topper RM**
A SOP expression having a domain of 3 variables will have a truth table having _____ combinations of inputs and corresponding output values.

A. 4 **Page 87**

B. 3

C. 2

D. 1

Question No:90 **(Marks:1)** **Vu-Topper RM**
The _____ is the slowest and consumes more power.

A. Standard TTL **Page 61**

B. Simple LTT

C. None

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D. Different TTL

Question No:91 (Marks:1) **Vu-Topper RM**

The output of a NAND gate is _____ when all the inputs are one.

A. 1 Page 47

B. 0

C. Available

D. Not available

Question No:92 (Marks:1) **Vu-Topper RM**

If the number of samples that are collected is reduced by half, the reconstructed signal will be _____ from/to the original.

A. Different Page 1

B. Between

C. Both

D. None of these

Question No:93 (Marks:1) **Vu-Topper RM**

Canonical form is a unique way of representing _____.

A. SOP Page 117

B. POS

C. SUM

D. PRODUCT

Question No:94 (Marks:1) **Vu-Topper RM**

In 16-bit ALU, The G output is activated if the 4-bit unit generates a Carry ___ irrespective of Carry ___.

A. Carry in, carry out

B. Carry out, carry in Page 150

C. Input number, carry in

D. Carry in, input number

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Question No:95 (Marks:1) **Vu-Topper RM**
A specific half-adder has _____ inputs and _____ output(s).

- A. 2.2** **Google**
B. 3.3
C. 4.2
D. 3.5

Question No:96 (Marks:1) **Vu-Topper RM**
All ABEL statements must end with _____.

- A. ;** **Page 203**
B. @
C. :
D. #

Question No:97 (Marks:1) **Vu-Topper RM**
Removing the NOT gate at the output of the NOR gate results in an

_____.

- A. OR gate** **Page 50**
B. AND
C. XOR
D. NOT

Question No:98 (Marks:1) **Vu-Topper RM**
When the number 29 is represented on 7-segment display, which BCD input is represented on LSD display unit?

- A. 1001** **Page 172**
B. 1000
C. 1100
D. 1010

Question No:99 (Marks:1) **Vu-Topper RM**
In a 4-variable K-map, a 2-variable product term is produced by

- A. 4-cell group of 1s**

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- B. a 8-cell group of 1s
- C. a 2-cell group of 1s
- D. a 4-cell group of 0s

Question No:100

(Marks:1)

Vu-Topper RM

The output of any CMOS _____ series logic gate can be at logic high '1' or logic low '0'

- A. 3.3 and 5volt**
- B. 2.2 and 5volt
- C. 1.1 and 5volt
- D. 3.2 and 5volt

Question No:101

(Marks:1)

Vu-Topper RM

1011 – 101 = _____

- A. 0110**
- B. 0011
- C. 1100
- D. 0101

Question No:102

(Marks:1)

Vu-Topper RM

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

- A. AC+B**
- B. AB=C
- C. BC=D
- D. AB+B

Question No:103

(Marks:1)

Vu-Topper RM

_____ and _____ are the steps of the Quine-McCluskey.

- A. Draw a table and make groups.
- B. Write binary codes and write SOP.
- C. Write binary codes and write POS.
- D. Find prime implicants and select minimal set of the prime implicants.**

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Question No:104

(Marks:1)

Vu-Topper RM

K-Map is difficult to manage for _____ or more variables.

A. 3

B. 5

C. 7 **Google**

D. 9

Question No:105

(Marks:1)

Vu-Topper RM

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

A. Zero

B. No Output as input is invalid.

C. One

D. Undefined

Question No:106

(Marks:1)

Vu-Topper RM

The GAL22V10 device is available as low-voltage _____ version.

A. 3.0V

B. 3.3V **Page 194**

C. 2.0V

D. 1.5V

Question No:107

(Marks:1)

Vu-Topper RM

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

A. Fixed, fixed

B. Programmable, fixed

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C. Fixed, programmable

D. Programmable, programmable

Question No:108

(Marks:1)

Vu-Topper RM

In 2-bit comparator the input combinations 00 01, 00 10, 00 11, 01 10, 01 11 and 10 11 are for _____?cs302

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- A. $A > B$
- B. $A = B$
- C. $A < B$**
- D. $A == B$

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Question No:109 (Marks:1) **Vu-Topper RM**
_____ single digit BCD Adders can be cascaded together to form a 2-digit BCD Adder.

- A. One
- B. Two**
- C. Four
- D. Three

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Question No:110 (Marks:1) **Vu-Topper RM**
Which of the following expression is in the product-of-sums form?

- A. $AB(CD)$
- B. $AB+CD$**
- C. $(AB)(CD)$
- D. $(A + B)(C+D)$

Google

Question No:111 (Marks:1) **Vu-Topper RM**
Binary Decoders have _____ inputs and _____ outputs

- A. $2n$
- B. $2^n, n$**
- C. $2n.n$
- D. n^2

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Question No:112 (Marks:1) **Vu-Topper RM**
Addition of two decimal digits in BCD can be done through

- A. Full Adder
- B. BCD adder**
- C. Ripple Carry Adder
- D. Carry Look Ahead Generator

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Question No:113

(Marks:1)

Vu-Topper RM

_____ have Buffers at the inputs which produce the actual variable and its complement.

A. PLA

B. PAL **Page 184**

C. GAL

D. EPROM

Question No:114

(Marks:1)

Vu-Topper RM

Any of the _____ forms of the Karnaugh Map can be used to simplify Boolean expressions.

A. One

B. Two **Page 89**

C. Five

D. Four

Question No:115

(Marks:1)

Vu-Topper RM

What is the value of output adding of following binary number

$1011+101 =$ _____

A. 11001

B. 11001

C. 00110

D. 11101

Question No:116

(Marks:1)

Vu-Topper RM

To determine the seven expressions for each of the seven outputs in 7-segment display, seven ___-variable Karnaugh maps are used.

A. 3 **ok**

B. 5

C. 2

D. 4

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Question No:117

(Marks:1)

Vu-Topper RM

A 3-variable Karnaugh map has

- A. Eight cells
- B. One cells
- C. Two cells
- D. Five cells

Question No:118

(Marks:1)

Vu-Topper RM

The limitation in implementation of parallel binary adders is known as

_____.

- A. Delay
- B. Carry input
- C. Carry output

D. Carry propagation

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Question No:119

(Marks:1)

Vu-Topper RM

In Cascading Priority Encoders, the EO output is connected to the EI input of the encoder which handles _____.

- A. Lower priority outputs
- B. Higher priority outputs
- C. Higher priority inputs

D. Lower priority inputs

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Question No:120

(Marks:1)

Vu-Topper RM

The domain of the expression $AB'CD + AB' + C'D + B$ is

- A. A, B
- B. B, C
- C. A, B, C

D. A,B,C and D

Question No:121

(Marks:1)

Vu-Topper RM

Boolean Addition operation is performed by a(n) _____ gate.

A. OR

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- B. AND
- C. XOR
- D. NAND

Question No:122 (Marks:1) **Vu-Topper RM**
Implementing the Adjacent 1s detector circuit directly from the function table based on the SOP form requires _____ gates for the 8 product terms (minterms) with an 8-input OR gate.

- A. 8 AND** **Page 123**
- B. 8 XOR
 - C. 8 OR
 - D. 8 NOR

Question No:123 (Marks:1) **Vu-Topper RM**
The GAL22V10 is a popular GAL device having _____ inputs and ten inputs/outputs.

- A. 10
- B. 12** **Page 194**
- C. 14
- D. 16

Question No:124 (Marks:1) **Vu-Topper RM**
Digital circuits operate with _____ voltage value(s).

- A. 2**
- B. 3
- C. 4
- D. 5

Question No:125 (Marks:1) **Vu-Topper RM**
How many data select lines are required for selecting eight inputs?

- A. 1
- B. 2
- C. 3** **Google**

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D.4

Question No:126

(Marks:1)

Vu-Topper RM

High level Noise Margins (VNH) of CMOS 5 volt series circuits is

A. 3.3v

B. 2.3v

C. 3.3a

D. 3.1v

Question No:127

(Marks:1)

Vu-Topper RM

Both the multiplexers are selected simultaneously when _____ is set to logic _____ in 2-Input, 8-bit Multiplexer.

A. S, Low

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B. S,High

C. G,Slow

D. G,High

Question No:128

(Marks:1)

Vu-Topper RM

“1101” in signed representation is equivalent to _____

A. 10

B. -5

C. -10

D. 13

Question No:129

(Marks:1)

Vu-Topper RM

In decimal value “275” the weight of the digit “7” is _____

A. 100

B. 1

C. 10

D. 0

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Question No:130

(Marks:1)

Vu-Topper RM

The decimal "10" will have an octal equivalent _____

- A. 9
- B. 10
- C. 11
- D. 12**

Question No:131

(Marks:1)

Vu-Topper RM

Caveman number system is Base _____ number system

- A. 2
- B. 5**
- C. 10
- D. 15

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Question No:132

(Marks:1)

Vu-Topper RM

Adjacent 1s detector circuit will have active low output for the input

- A. 1010
- B. 1011
- C. 0110
- D. 1101**

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Question No:133

(Marks:1)

Vu-Topper RM

Adjacent 1s detector circuit will have active high output for the input.

- A. 0101
- B. 0011**
- C. 1010
- D. 0001

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Question No:134

(Marks:1)

Vu-Topper RM

Maxterm is the sum of _____ of the corresponding Minterm with its literal complemented.

- A. Words**
- B. Terms

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- C. Nibble
- D. Numbers

Question No:135 (Marks:1) **Vu-Topper RM**
_____ has the fastest switching speed and low power requirements.

- A. Fast TTL
- B. Standard TTL
- C. Schottky TTL
- D. Advanced low power Schottky**

Question No:136 (Marks:1) **Vu-Topper RM**
Which of the following is the octal equivalent of 28 decimal number?

- A. 32
- B. 34**
- C. 31
- D. 33

Question No:137 (Marks:1) **Vu-Topper RM**
NAND and _____ gates are known as Universal Gates.

- A. NOR**
- B. OR
- C. NOT
- D. AND

Question No:138 (Marks:1) **Vu-Topper RM**
The declaration section of ABEL generally includes the device declaration, _____ declarations and set declarations.

- A. Pin** **Page 207**
- B. Cell
- C. Model
- D. System

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Question No:139

(Marks:1)

Vu-Topper RM

An SOP expression having a domain of 2 variables will have a truth table having _____ combinations of inputs and corresponding output values.

A. 2

B. 4

C. 6

D. 8

Question No:140

(Marks:1)

Vu-Topper RM

The complement of a variable is always

A. 1

B. 0

C. equal to the variable

D. The inverse of the variable

Question No:141

(Marks:1)

Vu-Topper RM

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

A. Distributive Law

B. Associative Law

C. Demorgan's Law

D. Commutative Law

Question No:142

(Marks:1)

Vu-Topper RM

Excess-8 code of -6 is _____.

A. 0010

B. 1010

C. 1110

D. 0110

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Question No:143

(Marks:1)

Vu-Topper RM

To represent in digital value, the number of digits (0s and 1s) that represents a quantity is _____ to the range of values that are to be represented.

- A. Greater
- B. Equal
- C. Lesser

D. Proportional

Page 5

Question No:144

(Marks:1)

Vu-Topper RM

3.3 v CMOS series is characterized by _____ and _____ as compared to the 5 v CMOS series.

- A. Fast switching speeds, high power dissipation
- B. Low switching speeds, high power dissipation
- C. Low switching speeds, very low power dissipation

D. Fast switching speeds, very low power dissipation

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Question No:145

(Marks:1)

Vu-Topper RM

Which one of the following is not a valid rule of Boolean algebra?

- A. $A = \bar{\bar{A}}$**
- B. $AA = A$
- C. $A + 1 = 1$
- D. $A + 0 = A$

Question No:146

(Marks:1)

Vu-Topper RM

How many outputs can an integrated circuit comparator have?

- A. One
- B. Two
- C. Five

D. Three

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Question No:147

(Marks:1)

Vu-Topper RM

Which of the following is not the correct method of grouping?

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- A. On corners
- B. Diagonally**
- C. Along adjacent rows
- D. Along adjacent columns

Question No:148

(Marks:1)

Vu-Topper RM

_____ methods are used to Convert Decimal fractions to Binary.

- A. 1
- B. 2**
- C. 3
- D. 4

Question No:149

(Marks:1)

Vu-Topper RM

Sum term (Max term) is implemented using _____ gates.

- A. OR**
- B. Not
- C. Nor
- D. And

Question No:150

(Marks:1)

Vu-Topper RM

TTL based devices work with a dc supply of _____ Volts

- A. +3
- B. +5**
- C. 3.3
- D. +10

Question No:151

(Marks:1)

Vu-Topper RM

Consider $A=1, B=0, C=1$. A, B and C represent the input of three bit NAND gate, the output of the NAND gate will be _____

- A. Undefined
- B. No output as input is invalid
- C. One**

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D. Zero

Question No:152

(Marks:1)

Vu-Topper RM

Adding two octal numbers “36” and “71” result in _____

A. 127

B. 213

C. 123

D. 345

Question No:153

(Marks:1)

Vu-Topper RM

The three fundamental gates are _____

A. NOT, OR, AND

B. OR, AND, NAND

C. NOT, NOR, XOR

D. AND, NAND, XOR

Question No:154

(Marks:1)

Vu-Topper RM

For a Standard SOP expression, a _____ is placed in the cell corresponding to the product term (Minterm) present in the expression.

A. 1

B. 0

C. X (don't care condition)

D. Any of given option depending on SOP term.

Question No:155

(Marks:1)

Vu-Topper RM

The carry propagation delay problem in parallel binary adder can be solved by _____.

A. Using two full adders

B. Using look-ahead carry circuits

C. Using bridge circuit between two adders

D. Carry propagation problem cannot be solved

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Question No:156

(Marks:1)

Vu-Topper RM

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

- A. 2-input, 4-bit
- B. 4-input, 8-bit
- C. 8-input, 2-bit
- D. 2-input, 8-bit**

Question No:157

(Marks:1)

Vu-Topper RM

A' is written in ABEL as _____.

- A. #A
- B. !A**
- C. @A
- D. \$A

Question No:158

(Marks:1)

Vu-Topper RM

Which of the following is the hexadecimal equivalent of 28?

- A. 1B
- B. 1C**
- C. 1A
- D. 1D

Question No:159

(Marks:1)

Vu-Topper RM

Which of the following gates has the output 1 if and only if at least one input is 1?

- A. OR**
- B. NOR
- C. AND
- D. NAND

Question No:160

(Marks:1)

Vu-Topper RM

A SOP expression can be implemented by an _____ combination of gates.

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- A. OR-XOR
- B. XOR-NOR
- C. AND-NAND
- D. AND-OR**

Question No:161 (Marks:1) **Vu-Topper RM**
GAL can be reprogrammed as instead of fuses E2CMOS logic is used which can be programmed to connect a _____ with a _____.

- A. row, row
- B. row, column**
- C. column, row
- D. column, column

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Question No:162 (Marks:1) **Vu-Topper RM**
The maximum value, represented by a single hexadecimal digit is _____

- A. "F"**
- B. "H"
- C. "E"
- D. "G"

Question No:163 (Marks:1) **Vu-Topper RM**
PLDs have In-System Programming (ISP) capability that allows the _____ to be programmed after they have been installed on a circuit board.

- A. PALs
- B. PLAs
- C. PLDs**
- D. EPROM

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Question No:164 (Marks:1) **Vu-Topper RM**
Subtractors also have output to check if 1 has been _____

- A. Shifted
- B. Primed

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C. Borrowed

D. Complemented

Question No:165

(Marks:1)

Vu-Topper RM

The NOR logic gate is the same as the operation of the _____ gate with an inverter connected to the output.

A. AND

B. OR

C. NAND

D. NOT

Question No:166

(Marks:1)

Vu-Topper RM

Consider the sum of weight method for converting decimal into binary value, _____ is the highest weight for 411.

A. 256

B. 512

C. 64

D. 128

Question No:167

(Marks:1)

Vu-Topper RM

Cin is part of _____ Adder.

A. Full

B. Half

C. Single

D. Double

Question No:168

(Marks:1)

Vu-Topper RM

A product term is 0 when _____.

A. All the literals are 1

B. Any one literal is 0

C. Any of the literals is 1

D. At least two literals are 1

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Question No:169

(Marks:1)

Vu-Topper RM

Which of the following is the example of comparator?

A. XNOR

B. AND

C. OR

D. XOR

Question No:170

(Marks:1)

Vu-Topper RM

In the 32-bit Single Precision Floating Point format, the exponent value _____ is reserved to represent infinity exponents.

A. 98

B. 99

C. 255

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D. 256

Question No:171

(Marks:1)

Vu-Topper RM

The Gray code is different from the unsigned binary code because

A. Gray Code is positional code

B. Gray Code ranges from "0" to "9"

C. Gray Code does not support negative values

D. Successive value of Gray code by only one bit

Question No:172

(Marks:1)

Vu-Topper RM

Portable devices that run on batteries use _____ circuits that have low power dissipation.

A. Series

B. Parallel

C. Electric

D. Integrated

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Question No:173

(Marks:1)

Vu-Topper RM

The measurable values generally change over a _____.

A. Specific period

B. Discrete range

C. Continuous range

Page 1

D. Time

Question No:174

(Marks:1)

Vu-Topper RM

Demultiplexer is also called _____

A. Data router

B. Data selector

C. Data encoder

D. Data Distributor

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Question No:175

(Marks:1)

Vu-Topper RM

“The complement of a product of variables is equal to the sum of the complements of the variables.” is known as:

A. Boolean Expression

B. Boolean Algebra Rule

C. Demorgan's First Theorem

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D. Demorgan's Second Theorem

Question No:176

(Marks:1)

Vu-Topper RM

The series of TTL chips are characterized by their _____.

A. Both

B. Power Dissipation Only

C. None of above

D. Switching Speed Only

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Question No:177

(Marks:1)

Vu-Topper RM

When two or more sum terms are multiplied by Boolean multiplication, the result is a _____ expression.

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A. POS **Page 77**

- B. Simplified
- C. SOP
- D. Boolean

Question No:178 **(Marks:1)** **Vu-Topper RM**
The logical sum of two or more logical product terms is called

- _____.
- A. POS
 - B. SOP**
 - C. OR Operation
 - D. NAND operation

Question No:179 **(Marks:1)** **Vu-Topper RM**
NAND gate is form by connecting _____

- A. AND Gate and then OR Gate
- B. OR Gate and then AND Gate
- C. NOT Gate and then AND Gate
- D. AND Gate and then NOT Gate**

Question No:180 **(Marks:1)** **Vu-Topper RM**
“74ALS” stands for _____

- A. Advanced low power Schottky TTL**
- B. Advanced Low-frequency Schottky TTL
- C. Advanced Low-dissipation Schottky TTL
- D. Advanced Low-propagation Schottky TTL

Question No:181 **(Marks:1)** **Vu-Topper RM**
Which one is true

- A. Power consumption of TTL is higher from CMOS**
- B. Power consumption of CMOS is higher than TTL
- C. Both TTL and CMOS have same power consumption

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D. Power consumption of both CMOS and TTL depends on no. of gates in circuit.

Question No:182

(Marks:1)

Vu-Topper RM

The 4-variable K-Map has _____ rows and _____ columns of cells.

A. 2,4

B. 4,4

C. 2,2

D. 4,2

Question No:183

(Marks:1)

Vu-Topper RM

Modern information transmission techniques are relying more on _____ transmission.

A. Digital

Page 5

B. Analogue

C. None of given

D. Both Digital and Analogue

Question No:184

(Marks:1)

Vu-Topper RM

The number "1259" may belong to _____ number system.

A. Binary number system

B. Octal or Decimal system.

C. Binary or Hexadecimal system

D. Decimal or Hexadecimal system

Question No:185

(Marks:1)

Vu-Topper RM

The _____ Gate is used in applications where the output signal is a 1 when any one input is a 1.

A. OR

Page 43

B. XOR

C. AND

D. NOT

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Question No:186

(Marks:1)

Vu-Topper RM

_____ and _____ Gates are used to detect dissimilar and similar inputs respectively.

- A. OR, XOR
- B. OR, Inverter
- C. NOT, XNOR

D. XOR, XNOR **Page 53**

Question No:187

(Marks:1)

Vu-Topper RM

The boolean expression $X = AB + CD$ represents

- A. an exclusive-Or
- B. a 4-input AND gate
- C. two ORs ANDed together

D. two ANDs ORed together

Question No:188

(Marks:1)

Vu-Topper RM

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

- A. +8 to -7
- B. +9 to -8
- C. +7 to -8**
- D. -9 to +8

Question No:189

(Marks:1)

Vu-Topper RM

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

- A. 1001**
- B. 1000
- C. 1111
- D. 0011

Question No:190

(Marks:1)

Vu-Topper RM

The output of an exclusive-OR gate is HIGH if _____.

- A. All inputs are LOW

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- B. All inputs are HIGH
C. All inputs are unequal
D. All inputs are DON'T care

Question No:191 (Marks:1) **Vu-Topper RM**
Which of the following is the hexadecimal equivalent of 39?

- A. 27** **Google**
B. 24
C. 26
D. 25

Question No:192 (Marks:1) **Vu-Topper RM**
To implement the decoder circuit, having _____ inputs and _____ outputs, function tables have to be drawn which represent the output status of each output line for all combinations of inputs.

- A. 1 and 9
B. 4 and 7 **Page 104**
C. 3 and 8
D. 5 and 6

Question No:193 (Marks:1) **Vu-Topper RM**
The output of an AND gate with three inputs, A, B, and C, is HIGH when _____.

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

Question No:194 (Marks:1) **Vu-Topper RM**
To represent the signal digitally the signal is sampled at _____ and _____ intervals.

- A. Fixed, Equal** **Google**
B. Unfixed, Equal

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- C. Fixed, Un-equal
- D. Unfixed, Un-equal

Question No:195 (Marks:1) **Vu-Topper RM**

In 32-bit Single-Precision Floating Point format representation the range of exponent value is from _____ to _____

- A. +127 to -126**
- B. +255 to -254
- C. +256 to -255
- D. +128 to -254

Question No:196 (Marks:1) **Vu-Topper RM**

In 15 digit decimal floating point format, the biased exponent value _____ can be used to represent the number infinity whatever the value of mantissa.

- A. 99**
- B. 98
- C. 256
- D. 255

Question No:197 (Marks:1) **Vu-Topper RM**

The values that exceed the specified range can not be correctly represented and are considered as _____

- A. Carry
- B. Parity
- C. Overflow**
- D. Sign value

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Question No:198 (Marks:1) **Vu-Topper RM**

$A + B = B + A$ is _____

- A. Distributive Law
- B. Associative Law
- C. Demorgan's Law

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D. Commutative Law Google

Question No:199

(Marks:1)

Vu-Topper RM

Demorgan's two theorems prove the equivalency of the NAND and _____ gates and the NOR and _____ gates respectively.

- A. Positive-OR, Positive-AND
- B. Negative-AND, Positive-OR
- C. Positive-OR, Negative-AND

D. Negative-OR, Negative-AND

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Question No:200

(Marks:1)

Vu-Topper RM

Karnaugh Map Array is considered to be wrapped around where all sides are _____ to each other.

- A. Serial
- B. Parallel
- C. Opposite

D. Adjacent

Page 90

Question No:201

(Marks:1)

Vu-Topper RM

The Boolean expression $(AB'CD')$ is _____

- A. a sumterm
- B. a maxterm
- C. a literal term

D. a product term

Question No:202

(Marks:1)

Vu-Topper RM

Which circuit is used in 7-segments display?

- A. BCD code**
- B. Gray code
- C. Binary code
- D. Excess code

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Question No:203

(Marks:1)

Vu-Topper RM

A 5-variable karnaugh map has

- A. Eight cells
- B. Sixteen cells
- C. Sixty four cells
- D. Thirty two cells**

Question No:204

(Marks:1)

Vu-Topper RM

Addition of two BCD digits requires two ____ Parallel Adder Circuits.

- A. 2-bit
- B. 4-bit**
- C. 8-bit
- D. 16-bit

Page 141

Question No:205

(Marks:1)

Vu-Topper RM

Which logical gate is used to connect the two active-low enable inputs of the two 4-input multiplexers to form the C input of the 8-input multiplexer?

- A. OR gate
- B. Xor gate
- C. Not gate**
- D. And gate

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Question No:206

(Marks:1)

Vu-Topper RM

The multiplexer has a/an _____ enable signal that enables/disables the four AND gates.

- A. Dependent active-low
- B. Dependent active-high
- C. Independent active-high
- D. Independent active-low**

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Question No:207

(Marks:1)

Vu-Topper RM

2's complement of 5 is

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A. 1101

B. 1011 Page 44

C. 0101

D. 100

Question No:208 (Marks:1) **Vu-Topper RM**

In iterative circuit implementation of $A=B$ function, If input A_0 is equal to input B_0 , the ____ gate output in Module 0 is a 1 which is passed on to Module 1 through its Cascading input.

A. OR

B. NOR

C. XOR

D. XNOR Page 155

Question No:209 (Marks:1) **Vu-Topper RM**

Which statement below best describes the function of decoder?

A. Decoders are used to prevent improper operation of digital systems

B. Decoders make it possible for one brand of computer to talk to another

C. A decoder will convert a decimal number into the proper binary equivalent Google

D. A decoder will convert a binary number into a corresponding output representing something meaningful

Question No:210 (Marks:1) **Vu-Topper RM**

ABEL is an acronym for

A. None of the given options

B. Advanced Boolean Equation Language

C. Advanced Boolean Expression Language Page 203

D. Advanced Broadband Enabled Longitude

Question No:211 (Marks:1) **Vu-Topper RM**

The decimal value "20" is equivalent to binary value _____ .

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A. 10100 **Google**

B. 00110

C. 11001

D. 00111

Question No:212

(Marks:1)

Vu-Topper RM

A _____ output can change from one state to the other by applying appropriate inputs.

A. Latch **Page 211**

B. Logic

C. Analog

D. None of these

Question No:213

(Marks:1)

Vu-Topper RM

In 1-to-4 demultiplexer, how many select lines are required

A. 1 select lines

B. 2 select lines

Page 396

C. 3 select lines

D. 4 select lines

Question No:214

(Marks:1)

Vu-Topper RM

In the Iterative Circuit for $A > B$, the output of Module 0 is 1 when

A. $A > B$ of Module 1 is 1

Page 155

B. $B > A$ of Module 1 is 1

C. $A = B$ of Module 1 is 1

D. $A - B$ of Module 1 is 1

Question No:215

(Marks:1)

Vu-Topper RM

The absence of a _____ element in sequential circuit restricts the use of digital combinational circuits to certain application areas.

A. Memory **Page 210**

B. Logic

C. Both

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D. None

Question No:216

(Marks:1)

Vu-Topper RM

The BCD to 7-Segment Decoder unlike the Binary Decoders activates multiple but unique set of outputs for each _____ BCD input combination.

A. 1-bit

B. 2-bit

C. 3-bit

D. 4-bit

Page 1

Question No:217

(Marks:1)

Vu-Topper RM

Which of the following is the MSI version of the Look-Ahead Carry Generator, which provides identical inputs and outputs except for the C4 output?

A. 74XX182

Page 151

B. 47xx182

C. 182XX74

D. 74XX183

Question No:218

(Marks:1)

Vu-Topper RM

Each Octal Number digit can represent a _____ Binary Number

A. 3 Bit

Page 31

B. 4

C. 5

D. 6

Question No:219

(Marks:1)

Vu-Topper RM

In 16-Input Multiplexer, the four outputs are connected together through a 4-input _____ gate.?

A. OR

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B. AND

C. XOR

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D. NAND

Question No:220

(Marks:1)

Vu-Topper RM

XOR is an abbreviation of-

A. Exclusively-OR

Google

B. Exclusively-AND

C. Exclusively-XOR

D. Exclusively-NAND

Question No:221

(Marks:1)

Vu-Topper RM

The expression $F=A.B.C$ describes the operation of three bits ____ Gate.

A. OR

Google

B. AND

C. XOR

D. NAND

Question No:222

(Marks:1)

Vu-Topper RM

Basic function of a Comparator is to _____ two binary quantities.

A. Different

B. Compare

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C. Both

D. None of these

Question No:223

(Marks:1)

Vu-Topper RM

How many of enable inputs is(are) active-low in 74XX138 3-to-8 Decoder?

A. One

B. Two

C. Four

D. Three

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Question No:224

(Marks:1)

Vu-Topper RM

In Caveman number system, the value "2" is represented by symbol

A. > Page 11

B. <

C. =

D. @

Question No:225

(Marks:1)

Vu-Topper RM

The carry, instead of rippling through the 4-bits of the individual ALU circuit, has to propagate through ___ ALU units in 16-bit ALU.

A. Four Page 150

B. One

C. Two

D. Three

Question No:226

(Marks:1)

Vu-Topper RM

Any of the _____ forms of the Karnaugh Map can be used to simplify Boolean expressions

A. 2 Page 89

B. 3

C. 4

D. 5

Question No:227

(Marks:1)

Vu-Topper RM

The ___ enable input of the decoder when set to 1 disables the decoder and the multiplexers.

A. G Page 171

B. B

C. A

D. S

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Question No:228

(Marks:1)

Vu-Topper RM

The _____ input selects/deselects both the decoders simultaneously.

A. Enable **Page 161**

B. Disable

C. Active high

D. Active low

Question No:229

(Marks:1)

Vu-Topper RM

In Odd parity generator circuit which gate is used to detect parity errors?

A. XOR **Page 132**

B. AND

C. XOR

D. NAND

Question No:230

(Marks:1)

Vu-Topper RM

The expression _____ is an example of Commutative Law for Multiplication.

A. $AB=BA$ **Page 72**

B. $BA@AB$

C. $BA=AB$

D. $AB\#BA$

Question No:231

(Marks:1)

Vu-Topper RM

In 32-bit Single –Precision floating point format representation the range of exponent value is from _____ to _____

A. +127 to -126

B. -126 to 127

C. +125 to 126

D. -127 to +128

Question No:232

(Marks:1)

Vu-Topper RM

If odd-Parity is being used therefore the 4-bit data and the parity bit should add up to give _____ of 1s.

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A. Prime

B. Add **Page 131**

C. Both

D. Even

Question No:233

(Marks:1)

Vu-Topper RM

How many 74HC85s are cascaded together forms a 12-bit Comparator circuit?

A. 1

B. 4

C. 3 **Page 156**

D. 2

Question No:234

(Marks:1)

Vu-Topper RM

The based devolves with WC supply....vexes

A. +1

B. -2

C. +3

D. +5

Question No:235

(Marks:1)

Vu-Topper RM

In 16-bit ALU, the Carry Out 16 is generated only when ALU3 has received Carry In ____.

A. 6

B. 8

C. 10

D. 12 **Page 150**

Question No:236

(Marks:1)

Vu-Topper RM

The terminal count of 4 bit binary counter in the UP mode is.....

A. 1001 **Page 288**

B. 0011

C. 1100

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D. 1010

Question No:237

(Marks:1)

Vu-Topper RM

The primary use of multiplexers is _____.

- A. Data Router
- B. Operation sequencing
- C. Logic function generator

D. Parallel to Serial Converter **Page 172**

Question No:238

(Marks:1)

Vu-Topper RM

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

A. 4 wires **Page 194**

- B. 2 wires
- C. 1 wires
- D. 3 wires

Question No:239

(Marks:1)

Vu-Topper RM

_____ uses E2CMOS technology which is Electrically Erasable CMOS instead of Bipolar technology and fusible links.

A. PAL

B. GAL **Page 183**

C. PLA

D. PROM

Question No:240

(Marks:1)

Vu-Topper RM

In a 4-bit binary counter, the next state after the terminal count in the DOWN mode is _____

A. 00 **Page 288**

B. 1111

C. 0001

D. 10000

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Question No:241

(Marks:1)

Vu-Topper RM

The maximum decimal number that can be represented using the 64-bit unsigned represented is..

A. $(2^{64})-1$

B. $(2^{65})-2$

C. $(2^{64})-3$

D. $(2^{65})-0$

Question No:242

(Marks:1)

Vu-Topper RM

In 8-input multiplexer, the two outputs are connected through a/an _____ gate.

A. OR

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B. NOT

C. AND

D. XOR

Question No:243

(Marks:1)

Vu-Topper RM

The _____ select input(s) of the two 4-input multiplexers are common in Dual 4-input multiplexer.

A. Two

Page 168

B. One

C. Five

D. Three

Question No:244

(Marks:1)

Vu-Topper RM

The PLA can be programmed to give an output of constant _____ or _____.

A. 2.3

B. 0.1

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C. 0.0

D. 1.2

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Question No:245 (Marks:1) **Vu-Topper RM**
Tri-State Buffer is a _____ gate with a control line that disconnects the output from the input.

- A. OR
- B. AND
- C. NOT**
- D. NAND

Page 196

Question No:246 (Marks:1) **Vu-Topper RM**
The counter states or the range of numbers of a counter is determined by the formula. ("n" represents the total number of flip-flops)

- A. (n raise to power 2)
- B. (n raise to power 2 and then minus 1)
- C. (2 raise to power n)**
- D. (2 raise to power n and then minus 1)

Question No:247 (Marks:1) **Vu-Topper RM**
RCO stands for _____

- A. Reconfiguration Counter Output
- B. Ripple Counter Output
- C. Reconfiguration Clock Output
- D. Ripple Clock Output**

Question No:248 (Marks:1) **Vu-Topper RM**
The 74HC163 is a 4-bit Synchronous Counter.it has.....data output pins

- A. 2
- B. 4**
- C. 6
- D. 8

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Question No:249

(Marks:1)

Vu-Topper RM

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

- A. Hold and Wait
- B. Clock Skew
- C. Race condition**
- D. Hold delay

Question No:250

(Marks:1)

Vu-Topper RM

An Astablemultivibrator is known as a(n) _____

- A. Oscillator**
- B. Booster
- C. One-shot
- D. Dual-shot

Question No:251

(Marks:1)

Vu-Topper RM

_____ occurs when the same clock signal arrives at different times at different clock inputs due to propagation delay.

- A. Race condition
- B. Clock Skew**
- C. Ripple Effect
- D. None of given options

Question No:252

(Marks:1)

Vu-Topper RM

The glitches due to "Race Condition" can be avoided by using a ___

- A. Gated flip-flops
- B. Pulse triggered flip-flops
- C. Positive-Edge triggered flip-flops
- D. Negative-Edge triggered flip-flops**

Question No:253

(Marks:1)

Vu-Topper RM

An Asynchronous Down-counter is implemented (Using J-K flipflop) by connecting_____

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- A. Q output of all flip-flops to clock input of next flip-flops
- B. Q' output of all flip-flops to clock input of next flip-flops**
- C. Q output of all flip-flops to J input of next flip-flops
- D. Q' output of all flip-flops to K input of next flip-flops

Question No:254

(Marks:1)

Vu-Topper RM

A decade counter is _____

- A. Mod-3 counter
- B. Mod-5 counter
- C. Mod-8 counter
- D. Mod-10 counter**

Question No:255

(Marks:1)

Vu-Topper RM

If S=1 and R=1, for negative edge triggered flip-flop then

- A. Direct
- B. Invalid**
- C. Valid
- D. Indirect

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Question No:256

(Marks:1)

Vu-Topper RM

The 3-to-8 Decoder has active-low outputs and three extra ____ gates connected at the three inputs to reduce the four unit load to a single unit load.

- A. Not**
- B. XOR
- C. OR
- D. AND

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Question No:257

(Marks:1)

Vu-Topper RM

CMOS technology is characterized by low power dissipation with ____ switching speeds.

- A. Slow**
- B. Fast

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- C. Medium
- D. Average

Question No:258 (Marks:1) **Vu-Topper RM**

To display the number ____ the BCD number 0010 representing the MSD is applied at the inputs of the BCD to 7-Segment display circuit connected to the MSD 7-Segment Display Digit.

- A. 19
- B. 29**
- C. 39
- D. 49

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Question No:259 (Marks:1) **Vu-Topper RM**

Multiplexers are also known as _____.

- A. Data Setters
- B. Data Selectors**
- C. Data Distributors
- D. Data Manipulators

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Question No:260 (Marks:1) **Vu-Topper RM**

PALs tend to execute _____ logic.

- A. SPD
- B. SAC
- C. SOP**
- D. SAP

Question No:261 (Marks:1) **Vu-Topper RM**

In CMOS 5 Volt series, Input voltage of Logic high signal (VIH) with a ranges from ____ to _____ volts.

- A. 0,5
- B. 3.5,5**
- C. 0,3.5
- D. 4.5,5

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Question No:262

(Marks:1)

Vu-Topper RM

What is the output expression of segment 'b' implementation in BCD to 7-segment decoder?

A. $B'+C'D'+CD$

B. $B' + C'D' + CD'$

C. $B + C'D' + C'D$

D. $B + C'D' + CD$

Question No:263

(Marks:1)

Vu-Topper RM

It is more suitable to use _____ method in order to simplify the Boolean expression having more than 4 variables.

A. Karnaugh map

B. Quin McClusky **Google**

C. De Morgan's theorem

D. Boolean algebra and Laws

Question No:264

(Marks:1)

Vu-Topper RM

The _____ output has the output of the OR gate connected through an XOR gate to the tri-state buffer.

A. PLA

B. Combinational

C. Combinational input/

D. Programmed Polarity

Page 18

Question No:265

(Marks:1)

Vu-Topper RM

Quine-McCluskey and K-Map methods are used for _____ of Boolean expression.

A. Addition

B. Subtraction

C. Multiplication

D. Simplification

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Question No:266

(Marks:1)

Vu-Topper RM

Which number is added for correction purpose to an incorrect result obtained in BCD addition?

A. 0001

B. 0110 **Page 35**

C. 1001

D. 0011

Question No:267

(Marks:1)

Vu-Topper RM

The switching speed of CMOS is now _____.

A. Slower than TTL

B. Twice that of TTL

C. Three times that of TTL

D. Competitive with TTL

Question No:268

(Marks:1)

Vu-Topper RM

Gray code of 8 is:

A. 1100 **Google**

B. 1000

C. 0000

D. 0100

Question No:269

(Marks:1)

Vu-Topper RM

A function represented by an expression in _____ form can be readily programmed.

A. Boolean

B. Standard SOP **Page 85**

C. Non-standard SOP

Question No:270

(Marks:1)

Vu-Topper RM

NOR gate is form by connecting _____

A. OR Gate and then AND Gate

B. AND Gate and then OR Gate

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- C. NOT Gate and then OR Gate
D. OR Gate and then NOT Gate

Question No:271

(Marks:1)

Vu-Topper RM

The digital circuits operate with which combination of values given below?

- A. 0 volts, 0 volts
B. -5 volts, 0 volts
C. +5 volts, 0 volts
D. -5 volts, +5 volts

Question No:272

(Marks:1)

Vu-Topper RM

2-Input, 8-bit Multiplexer, by setting the S input to logic _____ the _____ inputs of both the multiplexers are selected.

- A. Low, B
B. High, C
C. High, B
D. Low, C

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