



# CS302 P-Final Term-Spring 2024-MCQ'S Latest

Digital Logic and Design (Virtual University of Pakistan)



Scan to open on Studocu

# ( Virtual University )

Spring 2024

CS201(Introduction to Programming)

Final Term MCQ's 2024

Made by Default.

Warning: There is a chance that there are some wrong answers. All students are told to cross check these answers for better understanding of these concepts which will ultimately help you for the preparation of the Final Term Papers.

CS302P - Digital Logic Design (Practical) (Lab Attendance Quiz # 8) Quiz Start Time: 08:59 PM, 28 June 2024

Question # 1 of 5 ( Start time: 08:59:49 PM, 28 June 2024 ) Total Marks: 1

Convert the binary number 1100 to Gray code.

Select the correct option [Reload Math Equations](#)

- 1000
- 0111
- 0101
- 1010

[Click to Save Answer & Move to Next Question](#)

CS302P - Digital Logic Design (Practical) (Lab Attendance Quiz # 8) Quiz Start Time: 08:59 PM, 28 June 2024

Question # 2 of 5 ( Start time: 09:01:00 PM, 28 June 2024 ) Total Marks: 1

In a comparator, if we get input as  $A > B$  then the output will be -----

Select the correct option [Reload Math Equations](#)

- 0
- A
- 1
- B


[Click to Save Answer & Move to Next Question](#)

Question # 3 of 5 (Start time: 09:01:41 PM, 28 June 2024)

Total Marks: 1

Ripple counters are also called \_\_\_\_\_

Select the correct option

 Reload Math Equations

- Synchronous counters
- VLSI counters
- SSI counters
- Asynchronous counters


Click to Save Answer & Move to Next Question

Question # 4 of 5 (Start time: 09:02:20 PM, 28 June 2024)

Total Marks: 1

A decimal counter has \_\_\_\_\_ states.

Select the correct option

 Reload Math Equations

- 2
- 9
- 10
- 7

Click to Save Answer & Move to Next Question

Question # 5 of 5 ( Start time: 09:02:49 PM, 28 June 2024 )

Total Marks: 1

What is the maximum possible range of bit-count specifically in n-bit binary counter consisting of 'n' number of flip-flops?

Select the correct option

[Reload Math Equations](#)

- 0 to  $2^n - 1$
- 0 to  $2^n$
- 0 to  $2^{n+1}$
- 0 to  $2^n + 1$

[Click to Save Answer & Move to Next Question](#)

Question # 1 of 5 ( Start time: 10:18:37 AM, 05 July 2024 )

Total Marks: 1

Convert the Gray code 1011 to binary.

Select the correct option

[Reload Math Equations](#)

- 0111
- 1010
- 1101
- 1011

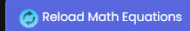
[Click to Save Answer & Move to Next Question](#)

Question # 2 of 5 ( Start time: 10:18:16 AM, 05 July 2024 )

Total Marks: 1

Comparators are used in \_\_\_\_\_

Select the correct option

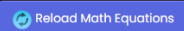
 Motherboard CPU Hard Drive Memory[Click to Save Answer & Move to Next Question](#)

Question # 3 of 5 ( Start time: 10:20:06 AM, 05 July 2024 )

Total Marks: 1

Which of the following is an invalid BCD code?

Select the correct option

 0101 0011 1101 1001[Click to Save Answer & Move to Next Question](#)

Question # 4 of 5 (Start time: 10:20:51 AM, 05 July 2024)

Total Marks: 1

Why do we use Gray Code?

Select the correct option

[Reload Math Equations](#)

- To count the number or bit changes
- Error Correction
- Invert the code
- Error Detection

[Click to Save Answer & Move to Next Question](#)

Question # 5 of 5 (Start time: 10:22:18 AM, 05 July 2024)

Total Marks: 1

In a comparator, if we get input as  $A > B$  then the output will be \_\_\_\_\_

Select the correct option

[Reload Math Equations](#)

- 1
- B
- 0
- A

[Click to Save Answer & Move to Next Question](#)

Question # 2 of 10 ( Start time: 11:15:57 AM, 25 June 2024 )

Total Marks: 1

In a full adder circuit having inputs  $A = 1$ ,  $B = 1$ ,  $C_{in} = 0$ , the outputs  $S$  and  $C_{out}$  will be \_\_\_\_\_.

Select the correct option

[Reload Math Equations](#)  $S = 1, C_{out} = 0$   $S = 0, C_{out} = 0$   $S = 1, C_{out} = 1$   $S = 0, C_{out} = 1$ [Click to Save Answer & Move to Next Question](#)

Question # 3 of 10 ( Start time: 11:18:31 AM, 25 June 2024 )

Total Marks: 1

Which of the following gates is used for parity generation for a binary data string?

Select the correct option

[Reload Math Equations](#) NOR XOR AND OR[Click to Save Answer & Move to Next Question](#)

Question # 5 of 10 ( Start time: 11:17:41 AM, 25 June 2024 )

Total Marks: 1

Don't care conditions can be used for simplifying Boolean expressions in \_\_\_\_\_.

Select the correct option

 Reload Math Equations

- Latches
- Registers
- Terms
- K-maps


[Click to Save Answer & Move to Next Question](#)

Question # 6 of 10 ( Start time: 11:18:06 AM, 25 June 2024 )

Total Marks: 1

When implementing a half adder by using gates, which of the following gates is used to return carry bit as an output?

Select the correct option

 Reload Math Equations

- XOR
- OR
- NAND
- AND

[Click to Save Answer & Move to Next Question](#)

Question # 7 of 10 (Start time: 11:18:38 AM, 25 June 2024)

Total Marks: 1

To build a full adder using gates, how many gates are required?

Select the correct option

[Reload Math Equations](#)

- |                                  |                                      |
|----------------------------------|--------------------------------------|
| <input checked="" type="radio"/> | 2 AND gates, 2 XOR gates, 1 OR gate  |
| <input type="radio"/>            | 1 AND gate, 2 OR gates, 1 XOR gate   |
| <input type="radio"/>            | 2 AND gates, 2 OR gates, 2 XOR gates |
| <input type="radio"/>            | 2 AND gates, 3 OR gates, 1 XOR gates |

[Click to Save Answer & Move to Next Question](#)

Question # 8 of 10 (Start time: 11:19:14 AM, 25 June 2024)

Total Marks: 1

The K-map based Boolean reduction is based on the following Unifying Theorem:  $A + A' = 1$ .

Select the correct option

[Reload Math Equations](#)

- |                                  |                 |
|----------------------------------|-----------------|
| <input type="radio"/>            | Force           |
| <input type="radio"/>            | Non Impact      |
| <input checked="" type="radio"/> | Complementarity |
| <input type="radio"/>            | Impact          |

[Click to Save Answer & Move to Next Question](#)

Question # 9 of 10 (Start time: 11:19:47 AM, 25 June 2024)

Total Marks: 1

A half adder can be built by using the combination of \_\_\_\_\_ and \_\_\_\_\_ gates.

Select the correct option

[Reload Math Equations](#)

- OR, XOR
- AND, NOT
- AND, OR
- AND, XOR

[Click to Save Answer & Move to Next Question](#)

Question # 10 of 10 (Start time: 11:20:23 AM, 25 June 2024)

Total Marks: 1

How many select lines would be required for an 8x1 multiplexer?

Select the correct option

[Reload Math Equations](#)

- 3
- 8
- 1
- 2

[Click to Save Answer & Move to Next Question](#)

Question # 1 of 10 (Start time: 01:05:54 PM, 02 July 2024)

Total Marks: 1

When implementing a half adder by using gates, which of the following gates is used to give Sum (S) as an output?

Select the correct option

[Reload Math Equations](#)

- |                                  |     |
|----------------------------------|-----|
| <input type="radio"/>            | NOR |
| <input type="radio"/>            | OR  |
| <input type="radio"/>            | AND |
| <input checked="" type="radio"/> | XOR |

[Click to Save Answer & Move to Next Question](#)

Question # 2 of 10 (Start time: 01:06:20 PM, 02 July 2024)

Total Marks: 1

Convert the binary number 1100 to Gray code.

Select the correct option

[Reload Math Equations](#)

- |                                  |      |
|----------------------------------|------|
| <input type="radio"/>            | 0101 |
| <input checked="" type="radio"/> | 1010 |
| <input type="radio"/>            | 1000 |
| <input type="radio"/>            | 0111 |

[Click to Save Answer & Move to Next Question](#)

Question # 3 of 10 ( Start time: 01:07:06 PM, 02 July 2024 )

Total Marks: 1

Which of the following symbols is used to represent XOR operation?

Select the correct option

[Reload Math Equations](#)

x

 $\oplus$ 

+

^

[Click to Save Answer & Move to Next Question](#)

Question # 4 of 10 ( Start time: 01:07:37 PM, 02 July 2024 )

Total Marks: 1

There are \_\_\_\_\_ cells in a 5-variable K-map.

Select the correct option

[Reload Math Equations](#)

64

24

16

32

[Click to Save Answer & Move to Next Question](#)

Question # 5 of 10 ( Start time: 01:08:05 PM, 02 July 2024 )

Total Marks: 1

The parallel outputs of a counter circuit represent the \_\_\_\_\_

Select the correct option

[Reload Math Equations](#) Clock frequency Clock count Counter modulus Parallel data word[Click to Save Answer & Move to Next Question](#)

Question # 6 of 10 ( Start time: 01:08:34 PM, 02 July 2024 )

Total Marks: 1

Which of the following expressions represents  $S$  output in a full adder?

Select the correct option

[Reload Math Equations](#)  $(A + B) \times C_m$   $(A \times C_m) \oplus B$   $(A \times B) \oplus C_m$   $A \oplus B \oplus C_m$ [Click to Save Answer & Move to Next Question](#)

Question # 8 of 10 (Start time: 01:10:14 PM, 02 July 2024)

Total Marks: 1

There are \_\_\_\_\_ cells in a 4-variable K-map.

Select the correct option

[Reload Math Equations](#)

- 8
- 20
- 24
- 16

[Click to Save Answer & Move to Next Question](#)

Question # 9 of 10 (Start time: 01:10:44 PM, 02 July 2024)

Total Marks: 1

Don't care conditions can be used for simplifying Boolean expressions in \_\_\_\_\_.

Select the correct option

[Reload Math Equations](#)

- K-maps
- Registers
- Latches
- Terms

[Click to Save Answer & Move to Next Question](#)

Question # 10 of 10 ( Start time: 01:11:09 PM, 02 July 2024 )

Total Marks: 1

Which of the following gates is used for parity generation for a binary data string?

Select the correct option

[Reload Math Equations](#)

- OR
- XOR
- NOR
- AND

[Click to Save Answer & Move to Next Question](#)

Question # 2 of 5 ( Start time: 02:04:22 PM, 05 July 2024 )

Total Marks: 1

Reflected Binary Code is also known as \_\_\_\_\_ code.

Select the correct option

[Reload Math Equations](#)

- Gray Code
- Excess-3
- ASCII
- BCD


[Click to Save Answer & Move to Next Question](#)

Question # 3 of 5 (Start time: 02:04:54 PM, 05 July 2024)

Total Marks: 1

Convert the binary number 1100 to Gray code.

Select the correct option

 Reload Math Equations

1010

1000

0101

0111


Click to Save Answer & Move to Next Question

Question # 4 of 5 (Start time: 02:05:32 PM, 05 July 2024)

Total Marks: 1

Which one is a basic comparator?

Select the correct option

 Reload Math Equations

XOR

NAND

AND

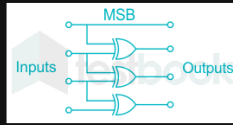
OR

Click to Save Answer & Move to Next Question

Question # 5 of 5 ( Start time: 02:06:11 PM, 05 July 2024 )

Total Marks: 1

Following diagram is of \_\_\_\_\_ code conversion.



Select the correct option

[Reload Math Equations](#)

- BCD
- Gray
- Excess-3
- ASCII

[Click to Save Answer & Move to Next Question](#)

Judge Holden