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Unit 2 - Week 0

Assignment 0

Your last recorded submission was on 2020-09-02, 01:02 IST **Due date: 2020-09-14, 23:59 IST.**

1) What is the binary representation of 45_{10}? ***1 point***

a. 101001
b. 111001
c. 101101
d. 101000

○ a.
○ b.
○ c.
○ d.

2) Express the hexadecimal number $AB27_{16}$ in binary? *1 point*

a. 1010 1011 0010 0111
b. 1010 1111 0011 0111
c. 1011 1011 1010 0111
d. 1011 1010 1010 0111

○ a.
○ b.
○ c.
○ d.

3) *1 point*

Which of the following switching expressions represent the Exclusive-NOR of two variables A and B?

a. A'B + AB'
b. A'B' + AB
c. (A + B')(A' + B)
d. (A' + B')(A + B)

☐ a.
☐ b.
☐ c.
☐ d.

4) *1 point*

Suppose A=0111 and B=1010, will there be an end around carry if you subtract B from A using 2's complement arithmetic?

a. Yes
b. No

○ a.
○ b.

5) *1 point*

Consider two 8-bit numbers R1 and R2, with values R1 = 56 (in hexadecimal), R2 = 27 (in hexadecimal). What will be the value of R1 – R3 ?

a. 29
b. 2D
c. 2E
d. 2F

○ a.
○ b.
○ c.
○ d.

6) *1 point*

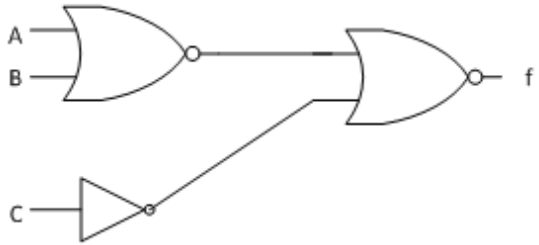
Consider a NMOS transistor, what should be the value of gate input for which the transistor is in conducting state? Assume that Logic-1 corresponds to high voltage, and Logic-0 corresponds to low voltage.

a. Logic 1
b. Logic 0
c. None of the above

○ a.
○ b.
○ c.

7) *1 point*

Consider the figure below, what will be the value of f when ABC = 101, and ABC = 001 ?



a. 1 and 0
b. 0 and 1
c. 0 and 0
d. 1 and 1

○ a.
○ b.
○ c.
○ d.

8) *1 point*

How many distinct switching functions of 3 variables are possible?

a. 8
b. 64
c. 256
d. 1024

○ a.
○ b.
○ c.
○ d.

9) *1 point*

Which of the following represents the correct order of memory types in terms of speed (fastest to slowest)?

a. Register, Cache Memory, Main Memory, Secondary Memory
b. Register, Main Memory, Cache Memory, Secondary Memory
c. Cache Memory, Main Memory, Register, Secondary Memory
d. None of these

○ a.
○ b.
○ c.
○ d.

10) What is the typical main memory capacity in a desktop computer system? *1 point*

a. 4 Kbytes
b. 4 Mbytes
c. 4 Gbytes
d. 40 Gbytes

- ○ a.
- ○ b.
- ○ c.
- ○ d.

You may submit any number of times before the due date. The final submission will be considered for grading.

Check Answers

Submit Answers