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State Finished

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Time taken 5 mins 58 secs

Grade 9.00 out of 10.00 (90%)

Question 1

Correct

Mark 1.00 out of 1.00

A 4-bit ALU can perform how many different arithmetic and logic operations?

- ☐ a. 8
- ☒ b. 16 ✓
- ☐ c. 32
- ☐ d. 64

Your answer is correct.

Question 2

Correct

Mark 1.00 out of 1.00

What is the purpose of a full-adder in binary addition?

- ☒ a. Adds two binary numbers and a carry-in ✓
- ☐ b. Subtracts two binary numbers
- ☐ c. Performs bitwise AND operation
- ☐ d. Performs bitwise OR operation

Your answer is correct.

Question 3

Correct

Mark 1.00 out of 1.00

What is the base value of the hexadecimal number system?

- ☐ a. 10
- ☐ b. 8
- ☐ c. 2
- ☒ d. 16 ✓

Question 4

Correct

Mark 1.00 out of 1.00

In binary addition, what is the carry when adding 1 + 1?

- ☐ a. 0
- ☒ b. 1 ✓
- ☐ c. 2
- ☐ d. 3

Question 5

Correct

Mark 1.00 out of 1.00

What is the binary representation of the decimal number 42?

- ☐ a. 11010
- ☐ b. 10110
- ☒ c. 101010 ✓
- ☐ d. 11000

Question 6

Correct

Mark 1.00 out of 1.00

Which gate is commonly used to implement binary addition in digital circuits?

- ☐ a. AND gate
- ☐ b. OR gate
- ☒ c. XOR gate ✓
- ☐ d. NOT gate

Question 7

Correct

Mark 1.00 out of 1.00

What is the binary representation of the decimal number 25?

- ☒ a. 11001 ✓
- ☐ b. 11010
- ☐ c. 11100
- ☐ d. 10100

Question 8

Correct

Mark 1.00 out of 1.00

What is the main function of an ALU?

- ☒ a. Perform arithmetic and logic operations ✓
- ☐ b. Store data temporarily
- ☐ c. Transfer data between memory and CPU
- ☐ d. Control the flow of data

Your answer is correct.

Question 9

Incorrect

Mark 0.00 out of 1.00

What is the result of adding 10101 and 11011 in binary?

- ☐ a. 101100
- ☒ b. 111100 ✗
- ☐ c. 110000
- ☐ d. 100000

Question 10

Correct

Mark 1.00 out of 1.00

In the binary number system, what is the base?

- ☒ a. 2 ✓
- ☐ b. 8
- ☐ c. 10
- ☐ d. 16

Your answer is correct.