

# Summary Exercise - Week 1

**Due** Oct 6 at 11:59pm  
**Allowed Attempts** 2

**Points** 35

**Questions** 35

**Time Limit** 360 Minutes

## Instructions

There's a six-hour time limit.

[Take the Quiz Again](#)

## Attempt History

|        | Attempt                   | Time       | Score        |
|--------|---------------------------|------------|--------------|
| LATEST | <a href="#">Attempt 1</a> | 55 minutes | 35 out of 35 |

Score for this attempt: **35** out of 35

Submitted Oct 1 at 4:45pm

This attempt took 55 minutes.

### Question 1

1 / 1 pts

Is the expression  $X \vee (Y \wedge Z)$  equivalent to  $(X \vee Y) \wedge (X \vee Z)$  for all possible inputs of X, Y, and Z?

Correct!

☒ True

☐ False

### Question 2

1 / 1 pts

How many bits are used by Unicode characters in MS-Windows?

Correct!

☒ 16

☐ 8

☐ 24

☐ 7

### Question 3

1 / 1 pts

The integer range of standard ASCII codes is:

☐ -128 to +127

☐ 0 to 270

☐ 0 to 65,535

Correct!

☒ 0 to 127

### Question 4

1 / 1 pts

The three most basic operators in Boolean algebra are AND, OR, and NOT.

Correct!

☒ True

☐ False

### Question 5

1 / 1 pts

A doubleword (on x86 systems) is 32 bits.

Correct!

☒ True

☐ False

### Question 6

1 / 1 pts

Three hexadecimal digits can be used to represent 12 binary bits.

Correct!

☒ True

☐ False

### Question 7

1 / 1 pts

The ASCII codes for alphabetic letters are smaller than for decimal digits.

☐ True

Correct!

☒ False

### Question 8

1 / 1 pts

Which of the following binary values is equivalent to hexadecimal 4A2B?

☐ 0100 1010 0010 1101

Correct!

- ☒ 0100 1010 0010 1011
- ☐ 0110 1011 0010 1001
- ☐ 0100 1010 1010 1011

### Question 9

1 / 1 pts

If an integer's sign bit is 1, the integer is positive.

- ☐ True
- ☒ False

Correct!

### Question 10

1 / 1 pts

Which of the following is the binary translation of signed decimal -33 ?

- ☐ 11100011
- ☐ 10101011
- ☒ 11011111
- ☐ 11001100

Correct!

### Question 11

1 / 1 pts

A program is considered portable if it . . .

Correct!

- ☒ can be executed on multiple platforms.
- ☐ none of the above
- ☐ can be rewritten in a different programming language without losing its meaning.
- ☐ can be quickly copied from conventional RAM into high-speed RAM.

### Question 12

1 / 1 pts

The expression  $X \vee Y$  is only true when X and Y are both true.

- ☐ True
- ☒ False

Correct!

### Question 13

1 / 1 pts

The most significant bit in a binary byte is numbered bit 8.

- ☐ True
- ☒ False

Correct!

### Question 14

1 / 1 pts

The two's complement of an integer is formed by doing which of the following?

Correct!

- ☐ changing the highest bit to a 1
- ☐ adding 2 and reversing the bits
- ☒ reversing (inverting) the bits and adding 1
- ☐ adding 1 and reversing the bits

### Question 15

1 / 1 pts

A quadword is 4 bytes.

Correct!

- ☐ True
- ☒ False

### Question 16

1 / 1 pts

Which internal bus uses binary signals to synchronize actions of all devices attached to the system bus?

Correct!

- ☐ address bus
- ☐ data bus
- ☐ I/O bus
- ☐ cache bus
- ☒ control bus
- ☐ city bus

### Question 17

1 / 1 pts

What is the name of the lowest 8 bits of the EDX register?

- ☐ DH
- ☐ not listed
- ☐ DX
- ☒ DL

Correct!

### Question 18

1 / 1 pts

If you wanted to find out whether an integer contained an even number of 1 bits, which status flag would be useful?

- ☒ parity
- ☐ carry
- ☐ overflow
- ☐ sign

Correct!

### Question 19

1 / 1 pts

What is the name of the time delay in a CPU caused by differences between the speed of the CPU, the system bus, and memory circuits?

- ☒ wait state

Correct!

- ☐ wait cycle
- ☐ spin cycle
- ☐ dead cycle
- ☐ bicycle
- ☐ memory write cycle

### Question 20

1 / 1 pts

List the three primary steps of the instruction execution cycle, in sequential order.

- ☐ fetch, memory read, execute
- ☐ fetch, decode, memory write
- ☒ fetch, decode, execute
- ☐ decode, fetch, execute

Correct!

### Question 21

1 / 1 pts

How much memory can be addressed in Real-address mode?

- ☒ 1MB
- ☐ 640K
- ☐ 4GB

Correct!



☐ 16MB

## Question 22

1 / 1 pts

The four parts of a CPU are:

☐ address bus, registers, control unit, arithmetic logic unit

Correct!

☒ clock, registers, control unit, arithmetic logic unit

☐ clock, memory unit, control unit, instruction fetch unit

☐ data bus, memory unit, control unit, arithmetic logic unit

## Question 23

1 / 1 pts

Which flag is set when an unsigned value is too large to fit into a destination operand?

☐ overflow

☐ red flag

☐ auxiliary carry

☐ sign

Correct!

☒ carry

☐ checkered

### Question 24

1 / 1 pts

How much memory can be addressed in Protected mode?

☐ 16MB

Correct!

☒ 4GB

☐ 640K

☐ 1MB

### Question 25

1 / 1 pts

High-speed memory that reduces the frequency of access by the CPU to conventional memory is called

☐ system memory

☐ local memory

Correct!

☒ cache memory

☐ virtual memory

### Question 26

1 / 1 pts

The following is a valid data definition statement:

```
str1 \  
BYTE "This string is quite long!",0
```

Correct!

☒ True

☐ False

### Question 27

1 / 1 pts

The listing file contains a list of program symbols.

Correct!

☒ True

☐ False

### Question 28

1 / 1 pts

The following are both valid data definition statements:

```
List1 BYTE 10,20  
        BYTE 30,40
```

Correct!

☒ True

☐ False

### Question 29

1 / 1 pts

An identifier may begin with a digit.

☐ True

Correct!

☒ False

### Question 30

1 / 1 pts

In the AddSub program in Section 3.2, the exit statement calls which predefined MS-Windows function to halt the program?

☐ HaltProgram

Correct!

☒ ExitProcess

☐ OS\_Return

☐ Exit\_Program

### Question 31

1 / 1 pts

Which letter choice shows the memory byte order, from low to high address, of the following data definition?

BigVal DWORD 12345678h

☐ 56h, 78h, 12h, 34h

☐ 34h, 12h, 78h, 56h

☐ 12h, 34h, 56h, 78h

Correct!

☒ 78h, 56h, 34h, 12h

### Question 32

1 / 1 pts

The EQU directive permits a constant to be redefined at any point in a program.

☐ True

Correct!

☒ False

### Question 33

1 / 1 pts

In the following data definition, assume that List2 begins at offset 2000h. What is the offset of the third value (5)?

```
List2 WORD 3,4,5,6,7
```

☐ 2002h

☐ 20008h

☐ 2008h

Correct!

☒ 2004h

☐ 20006h

☐ 2000h

### Question 34

1 / 1 pts

Which of the following are true about assembly language instructions and directives? (select all that apply)

☐ a directive is executed at runtime

Correct!



A directive is a set of assembler instructions that are gathered at assembly time.



an instruction is executed at assembly time

Correct!



an instruction is executed at runtime

### Question 35

1 / 1 pts

Which directive identifies the part of a program containing instructions?

☐ .stack

☐ .prog

☒ .code

☐ .product

☐ .data

☐ .net

Correct!

Quiz Score: **35** out of 35