

Summary Exercise - Week 1

Due Oct 2 at 3:59pm **Points** 35 **Questions** 35 **Available** until Oct 2 at 3:59pm
Time Limit 360 Minutes **Allowed Attempts** 2

Instructions

There's a six-hour time limit.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	53 minutes	29 out of 35

Score for this attempt: 29 out of 35
Submitted Oct 2 at 2:32pm
This attempt took 53 minutes.

Correct!

Question 1

1 / 1 pts

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

☒ True

☐ False

Correct!

Question 2

1 / 1 pts

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

☐ True

☒ False

Question 3

1 / 1 pts

Correct!

A signed integer stores the sign in the least significant bit (LSB).

☐ True

☒ False

Correct!

Question 4

1 / 1 pts

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

☐ True

☒ False

Correct!

Question 5

1 / 1 pts

A word (on x86 systems) is 16 bits.

☒ True

☐ False

Correct!

Question 6

1 / 1 pts

A signed byte can be equal to +127.

☒ True

☐ False

Question 7

1 / 1 pts

Correct!

Which list contains the correct hexadecimal translation (in order) of the following unsigned decimal integers? 33, 95, 257

- ☐ 21, 62, 103
- ☒ 21, 5F, 101
- ☐ 6A, 5F, 101
- ☐ 22, 5E, 11A

Correct!

Question 8

1 / 1 pts

A doubleword (on x86 systems) is 32 bits.

- ☒ True
- ☐ False

Correct!

Question 9

1 / 1 pts

A quadword is 4 bytes.

- ☐ True
- ☒ False

Correct!

Question 10

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?

- ☒ True
- ☐ False

Correct!

Question 11

1 / 1 pts

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

- ☐ True
- ☒ False

Correct!

Question 12

1 / 1 pts

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

- ☐ 8
- ☒ 16
- ☐ 7
- ☐ 24

You Answered

Question 13

0 / 1 pts

A program that combines object files into an executable program is called a _____.

- ☒ compiler
- ☐ assembler
- ☐ linker
- ☐ loader

Correct Answer

Question 14

1 / 1 pts

Correct!

What is the largest signed integer that may be stored in 32 bits?

- ☒ $2^{31} - 1$
- ☐ 2^{31}
- ☐ $2^{32} - 1$
- ☐ 2^{32}

Question 15

1 / 1 pts

What is the largest unsigned integer that may be stored in 24 bits?

- ☐ 1,048,576
- ☐ 65,536
- ☒ 16,777,215
- ☐ 32,767

Correct!

Question 16

1 / 1 pts

Which two 32-bit registers are known as extended index registers?

- ☐ EBP, ESP
- ☒ ESI, EDI
- ☐ EAX, EBX
- ☐ SI, DI

Correct!

Question 17

1 / 1 pts

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

- ☐ local memory
- ☐ system memory
- ☐ virtual memory
- ☒ cache memory

Correct!

Question 18

1 / 1 pts

The four parts of a CPU are:

- ☐ data bus, memory unit, control unit, arithmetic logic unit
- ☐ address bus, registers, control unit, arithmetic logic unit
- ☐ clock, memory unit, control unit, instruction fetch unit
- ☒ clock, registers, control unit, arithmetic logic unit

Correct!

Question 19

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?

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

Correct!

Question 20

1 / 1 pts

During which phase of the instruction execution cycle is the program counter incremented?

- ☐ execute
- ☐ decode
- ☒ fetch
- ☐ operand fetch

Correct!

Question 21

0 / 1 pts

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

- ☐ sign
- ☒ overflow
- ☐ red flag
- ☐ checkered
- ☐ carry
- ☐ auxiliary carry

You Answered

Correct Answer

2.2.2

Question 22

1 / 1 pts

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

- ☐ fetch, decode, memory write

☐ fetch, memory read, execute

☒ fetch, decode, execute

☐ decode, fetch, execute

Correct!

Question 23

1 / 1 pts

How much memory can be addressed in Protected mode?

- ☐ 16MB
- ☒ 4GB
- ☐ 1MB
- ☐ 640K

Correct!

Question 24

1 / 1 pts

The three types of buses connected to the CPU are:

- ☐ data, system, address
- ☐ address, control, memory
- ☐ fetch-decode, control, execution
- ☒ data, address, control

Correct!

Question 25

0 / 1 pts

Suppose that you are given the following program. What decimal value does the AX register hold when *someProcedure* is called??

```
.data
```

```
x  DWORD  153461
y  BYTE   37
z  BYTE   90
```

```
.code
main PROC
mov  AH, y
mov  AL, z
call someProcedure
inc  EAX
mov  EBX, z
xor  EAX, EBX
exit
main ENDP
END MAIN
```

☐ 23077

☐ 9037

☒ 3790

☐ 9562

You Answered

Correct Answer

Question 26

1 / 1 pts

Which directive is used when defining 64-bit IEEE long reals?

☐ REAL64

☐ REAL

☐ REAL4

☒ REAL8

Correct!

Question 27

1 / 1 pts

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

☐ True

☒ False

Correct!

Question 28

0 / 1 pts

The following sequence of statements is **invalid**:

```
.code
mov  eax,edx
.data
myByte BYTE 10
.code
mov  al,myByte
```

☒ True

☐ False

You Answered

Correct Answer

Question 29

1 / 1 pts

Given the following array definition, which letter choice contains a valid constant declaration named ArrayCount that automatically calculates the number of elements in the array?

```
newArray DWORD 10,20,30,40,50
```

☐ ArrayCount = newArray - \$

☐ ArrayCount = (newArray - \$) - 4

☒ ArrayCount = (\$ - newArray) / 4

☐ ArrayCount DWORD \$ - newArray

Correct!

Question 30

1 / 1 pts

An identifier may begin with a digit.

- ☐ True
- ☒ False

Correct!

Question 31

0 / 1 pts

The following is a valid identifier: AB62-\$

- ☒ True
- ☐ False

You Answered

Correct Answer

Question 32

1 / 1 pts

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

- ☒ ExitProcess
- ☐ HaltProgram
- ☐ OS_Return
- ☐ Exit_Program

Correct!

Question 33

1 / 1 pts

The following is a valid data definition statement:

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

- ☒ True

Correct!

- ☐ False

Question 34

0 / 1 pts

Which directive identifies the part of a program containing instructions?

- ☐ .net
- ☐ .prog
- ☐ .stack
- ☒ .data
- ☐ .product
- ☐ .code

You Answered

Correct Answer

Question 35

1 / 1 pts

Which of the following are valid data definition statements that create an array of unsigned bytes containing decimal 10, 20, and 30, named myArray?

- ☐ BYTE myArray 10, 20, 30
- ☐ BYTE myArray[3]: 10, 20,30
- ☐ myArray BYTE DUP (3) 10,20,30
- ☒ myArray BYTE 10, 20, 30

Correct!

Quiz Score: 29 out of 35