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

|  |  |
| --- | --- |
|  | 65,536 |
|  | 1,048,576 |

|  |  |
| --- | --- |
|  | 16,777,215 |
|  | 32,767 |

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

|  |  |
| --- | --- |
|  | True |
|  | False |

The expression X space logical or space Y is only true when X and Y are both true.

|  |  |
| --- | --- |
|  | True |
|  | False |

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

|  |  |
| --- | --- |
|  | changing the highest bit to a 1 |
|  | reversing (inverting) the bits and adding 1 |

|  |  |
| --- | --- |
|  | adding 2 and reversing the bits |
|  | adding 1 and reversing the bits |

A doubleword (on x86 systems) is 32 bits.

|  |  |
| --- | --- |
|  | True |
|  | False |

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

|  |  |
| --- | --- |
|  | True |
|  | False |

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

|  |  |
| --- | --- |
|  | True |
|  | False |

0 is positive 1 is negative

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

|  |  |
| --- | --- |
|  | 24 |
|  | 16 |

|  |  |
| --- | --- |
|  | 7 |
|  | 8 |

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

|  |  |
| --- | --- |
|  | 0100 1010 1010 1011 |
|  | 0100 1010 0010 1101 |

|  |  |
| --- | --- |
|  | 0100 1010 0010 1011 |
|  | 0110 1011 0010 1001 |

Which of the following correctly describes the Java Virtual Machine?

|  |  |
| --- | --- |
|  | provides virtual memory management for the operating system |
|  | executes Java Bytecodes |

|  |  |
| --- | --- |
|  | translates Java into Java Bytecodes |
|  | makes Java run faster on x86 computers |

A quadword is 4 bytes.

|  |  |
| --- | --- |
|  | True |
|  | False |

Is the expression X space logical or space left parenthesis Y space logical and space Z right parenthesis equivalent to left parenthesis X space logical or space Y right parenthesis space logical and space left parenthesis X space logical or space Z right parenthesis for all possible inputs of X, Y, and Z?

|  |  |
| --- | --- |
|  | True |
|  | False |

The expression not left parenthesis X space logical and space Y right parenthesis is true when X and Y are both false.

|  |  |
| --- | --- |
|  | True |
|  | False |

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

|  |  |
| --- | --- |
|  | linker |
|  | compiler |

|  |  |
| --- | --- |
|  | assember |
|  | loader |

Which of the following binary values is equivalent to hexadecimal 7CBE?

|  |  |
| --- | --- |
|  | 0111 1100 1011 1110 |
|  | 0111 1100 1100 1110 |

|  |  |
| --- | --- |
|  | 0111 1011 1011 1100 |
|  | 0111 1101 1011 1110 |

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

|  |  |
| --- | --- |
|  | I/O bus |
|  | cache bus |

|  |  |
| --- | --- |
|  | control bus |
|  | address bus |

|  |  |
| --- | --- |
|  | city bus |
|  | data bus |

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How much memory can be addressed in Protected mode?

|  |  |
| --- | --- |
|  | 640K |
|  | 1MB |

|  |  |
| --- | --- |
|  | 4GB |
|  | 16MB |

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

|  |  |
| --- | --- |
|  | 9562 |
|  | 3790 |

|  |  |
| --- | --- |
|  | 9037 |
|  | 23077 |

The four parts of a CPU are:

|  |  |
| --- | --- |
|  | data bus, memory unit, control unit, arithmetic logic unit |
|  | clock, registers, control unit, arithmetic logic unit |

|  |  |
| --- | --- |
|  | clock, memory unit, control unit, instruction fetch unit |
|  | address bus, registers, control unit, arithmetic logic unit |

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

|  |  |
| --- | --- |
|  | overflow |
|  | carry |

|  |  |
| --- | --- |
|  | sign |
|  | red flag |

|  |  |
| --- | --- |
|  | auxiliary carry |
|  | checkered |

If a clock oscillates 10 billion times per second, what is the duration of a single clock cycle?

|  |  |
| --- | --- |
|  | 1.0 X 10-10 seconds |
|  | 1 nanosecond |

|  |  |
| --- | --- |
|  | 1 sagon seconds |
|  | 1.0 x 10-9 seconds |

|  |  |
| --- | --- |
|  | 1.0 x 1010 seconds |
|  | 1 jiffy |

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

|  |  |
| --- | --- |
|  | carry |
|  | overflow |

|  |  |
| --- | --- |
|  | sign |
|  | parity |

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

|  |  |
| --- | --- |
|  | ESI, EDI |
|  | EBP, ESP |

|  |  |
| --- | --- |
|  | SI, DI |
|  | EAX, EBX |

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 cycle |
|  | bicycle |

|  |  |
| --- | --- |
|  | dead cycle |
|  | memory write cycle |

|  |  |
| --- | --- |
|  | wait state |
|  | spin cycle |

Which register is known as a loop counter?

|  |  |
| --- | --- |
|  | ECX |
|  | LOX |

|  |  |
| --- | --- |
|  | EBX |
|  | EDX |

|  |  |
| --- | --- |
|  | EAX |

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

|  |  |
| --- | --- |
|  | myArray BYTE 10, 20, 30 |
|  | BYTE myArray[3]: 10, 20,30 |

|  |  |
| --- | --- |
|  | BYTE myArray 10, 20, 30 |
|  | myArray BYTE DUP (3) 10,20,30 |

Select a data definition statement that creates an array of 500 signed doublewords named myList and initializes each array element to the value -1.

|  |  |
| --- | --- |
|  | SDWORD myList 500 DUP (-1) |
|  | myList 500 SDWORD (-1) |

|  |  |
| --- | --- |
|  | myList SDWORD 500 DUP (-1) |
|  | myList 500 SDWORD DUP (-1) |

The byte-ordering scheme used by computers to store large integers in memory with the high-order byte at the lowest address is called:

|  |  |
| --- | --- |
|  | big endian |
|  | byte-minor |

|  |  |
| --- | --- |
|  | nibble |
|  | tasty |

|  |  |
| --- | --- |
|  | byte-major |
|  | little endian |

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 |
|  | 2008h |

|  |  |
| --- | --- |
|  | 20006h |
|  | 20008h |

|  |  |
| --- | --- |
|  | 2000h |
|  | 2004h |

The following is a valid identifier:  AB62-$

|  |  |
| --- | --- |
|  | True |
|  | False |

Which utility program reads an assembly language source file and produces an object file?

|  |  |
| --- | --- |
|  | compiler |
|  | loader |

|  |  |
| --- | --- |
|  | editor |
|  | detangler |

|  |  |
| --- | --- |
|  | assembler |
|  | linker |

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

|  |  |
| --- | --- |
|  | an instruction is executed at runtime |
|  | a directive is executed at runtime |

|  |  |
| --- | --- |
|  | an instruction is executed at assembly time |
|  | a directive is executed at assembly time |

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 |

|  |  |
| --- | --- |
|  | 78h,56h,34h,12h |
|  | 12h,34h,56h,78h |

Operands may be any of the following: (select all that apply)

|  |  |
| --- | --- |
|  | register name |
|  | variable name (memory) |

|  |  |
| --- | --- |
|  | constant or constant expression |
|  | reserved word |

Which directive identifies the part of a program containing instructions?

|  |  |
| --- | --- |
|  | .net |
|  | .prog |

|  |  |
| --- | --- |
|  | .product |
|  | .code |

|  |  |
| --- | --- |
|  | .data |
|  | .stack |

The integer range of standard ASCII codes is:

0 to 65,535

0 to 270

0 to 127

-128 to +127

 A program is considered portable if it . . .

none of the above

can be executed on multiple platforms.

can be quickly copied from conventional RAM into high-speed RAM.

can be rewritten in a different programming language without losing its meaning.

The expression X space logical and space Y is true only when X and Y are both true.

**Correct!**

  True

False

 Device drivers nearly always contain some code written in

**Correct!**

 assembly language

an application-oriented language

Java

machine language

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

**Correct!**

True

False

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

decode, fetch, execute

fetch, decode, execute

fetch, decode, memory write

fetch, memory read, execute

 The three types of buses connected to the CPU are:

  data, system, address

data, address, control

fetch-decode, control, execution

address, control, memory

 The basic parts of an instruction, in order from left to right, are:

mnemonic, operand(s), comment

label, mnemonic, comment

label, mnemonic, operand(s), comment

comment, label, mnemonic, operand(s)

 The following is a valid data definition statement:

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

**Correct!**

  True

False

 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 - $) - 4

ArrayCount = newArray - $

ArrayCount DWORD $ - newArray

ArrayCount = ($ - newArray) / 4

 Which of the following defines a text macro named MESSAGE that contains this string data?

"I'm good at this!",0

TEXTEQU MESSAGE <"I'm good at this!",0>

<"I'm good at this!",0> TEXTEQU MESSAGE

TEXTEQU <"I'm good at this!",0> MESSAGE

**Correct!**

MESSAGE TEXTEQU <"I'm good at this!",0>