

Assignment#3 Memory and Data Types QUIZ

(keep track of your answers with a pen and paper then check the answers at the end)

1. In computer science a "bit" always refers to...

- a) a transistor with no current
- b) a single piece of information (either ON or OFF)
- c) Binary code
- d) 8 Bytes

2. "char" is

- a) the way to declare a character variable
- b) an integer variable
- c) a string variable
- d) a data type that requires 4 bytes
- e) a data type that only requires 1 bit

3. The **Binary** is number system that

- a) requires 8 bits
- b) only has two values 0's and 1's
- c) can only represent 256 values

4. A computer uses a binary number system because

- a) Vacuum tubes have three switches (ON, OFF, LOW)
- b) there used to be only two keys on a keyboard (0 and 1)
- c) transistors are programmed to convert Hexadecimal to binary
- d) Circuits are only capable of representing two distinct values (ON and OFF).

5. A **Byte** is equal to

- a) 8 billion Gigabytes
- b) 8 bits
- c) 2 bits
- d) 1 Kilobyte

6. What is the following number written as a decimal 00010011

- a) 9
- b) 0
- c) 1
- d) 3
- e) 19

7. What is the binary number for 27

- a) 00010010
- b) 00101010
- c) 00011101
- d) 00011011

8. Computer circuits are set up to create distinct groups of individual **bytes**. Each of these has a unique:

- a) shape
- b) color code
- c) directory
- d) location and address

9. Storing variables requires memory. Each variable takes up how much memory?

- a) 1 byte each
- b) 1 bit each
- c) It depending on the type of variable

10. The specifier required to print a float variable is

- a) %d
- b) &f
- c) /n
- d) &float
- e) %f

11. How many **bytes** does a "**double**" variable take up

- a) 1
- b) 2
- c) twice as many as a character variable
- d) 8

12. What does the sizeof() function do in C?

- a) nothing. This is a trick question. stop trying to trick me.
- b) everything. This function does anything you want....literally anything
- c) tells you how many characters in a string
- d) tells you how many bytes of memory a data type will take up
- e) tells you how many elements in an array
- f) tells you the range of a variable

13. #include <float.h> is necessary at the beginning of a C program if you want to:

- a) use floats in your program
- b) find the height of a float
- c) initiate the .h command for integer conversions
- d) determine the amount of bytes a float will take up
- e) determine the range values of a float data type

14. A "pointer" in C is

- a) a variable that has 4 parameters [north, east, west, south]
- b) a variable that hold the memory address of another variable
- c) a function in C that can tell you whether or not a integer is long or short
- d) a function in C that can be used to organize if statements

15. an example of the correct way to declare a pointer would be

- a) int *ip;
- b) *ip forward int
- c) float pf*
- d) &p

16. Pointers are sometimes used to

- a) make a computer program turn floats into integers
- b) use memory more efficiently and help a program run faster
- c) determine if an object is pointing North, West, East, or Sout
- d) reduce the amount of memory available processor calculations

17. ASCII code was designed to

- a) to help convert symbols (% ^ & * \$) into letters (A, B, C, D)
- b) create an American Standard of binary code
- c) convert binary numbers into decimal numbers
- d) to standardize the number values used to represent keyboard characters

18. The ASCII code for the character D (capital D)

- a) 4
- b) 65
- c) 0010111
- d) *&D
- e) 68

Answers on next page.

Answers:

1. B
2. A
3. B
4. D
5. B
6. E
7. D
8. D
9. C
10. E
11. D
12. D
13. E
14. B
15. A
16. B
17. D
18. E