

## PRELAB #4 - CSE 1310

1. What is the result of the following expression?

$$8/4+2*3-4$$

- a) 4
- b) 0
- c) 2
- d) 8

2. What is the result of the following expression?

$$5+((2*(9+5))-4)/2$$

- a) 12.5
- b) 14.5
- c) 15
- d) 17

3. Which of the following is not a data type in C?

- a) float
- b) double
- c) char
- d) int
- e) bool

4. What happens when you declare a variable?

- a) The variable name gets printed
- b) The variable can no longer be used
- c) The data type can no longer be used
- d) Memory is reserved for that variable

5. Declaring and initializing can be done on the same line. True or False?

6. If you try to assign a fraction to an int variable, \_\_\_\_\_ (upwards rounding or truncation) occurs.

7. The following statement is valid: `int d = 'X';`  
True or False?

8. If an operand 'c' is declared as type 'int', then the expression 'c+5.0' will be of type 'int'. True or False?

9. What would be the best variable type for the area of a circle in square inches? Which type for the number of cars passing through an intersection in an hour?

10. Fill in the blank:

- 1) %s is used for \_\_\_\_\_.
- 2) %f is used for \_\_\_\_\_.
- 3) %lf is used for \_\_\_\_\_.

11. The temperature of a city is obtained at a weather station in degrees centigrade. Your job is to convert this temperature into its corresponding value in degrees Fahrenheit. Assume the data type for the value of temperature to be 'double' and use the following formula for the conversion:  $F = (9/5) * C + 32$ . Work out the design and analysis for solving this problem. Write the pseudocode logic for this problem and draw a graphical representation of your design using flowchart diagram.

Work on the analysis of the problem by answering the following questions:

1. What is the expected output of this program?

2. What are the inputs to the program?

3. Flowchart:

4. Pseudocode: