CS124 Unit 2 Practice Test **Name** _____

Instructions: This is a closed book and closed note test. Please write your answer (A, B, C, D, or E) clearly in the Answer column. When you are done, complete the quiz in I-Learn. After you submit your test, you can retake the quiz a second time to correct errors made. Your highest grade between the two attempts will be recorded. You must turn in the paper exam afterwards. Please ensure your name is written on the top.

Problem	Question	Choices	Answer
1 (Unit 1 Topic)	Which of the following is not True about order of operations?	a) ()'s are done first b) =, +=, -=, *=, /=. %= are done last c) + and – are done after ++ , -- d) *, /, % are done before + , - e) When + and – are done they are performed from right to left.	

2
(Unit 1 Topic)
	What is the output of this code:
	
	int x = 1;
	int y = (x++) + 1;
	int z = (++x) + 1;
	cout << x << "," << y << "," << z;
		a) 3 2 4
		b) 3 3 5
		c) 3 4 4
		d) 4 5 5
		e) 4 4 4	

3
(Unit 1 Topic)
	What is the output of the following code?
	
	void doWork(int x, int &y, int z)
	{
	x++;
	y++;
	z++;
	}
	
	int main()
	{
	int xx = 0;
	int yy = 0;
	int zz = 0;
	doWork(xx, yy, zz);
	cout << xx << "," << yy << "," << zz;
	return 0;
	}
		a) 1,1,1
		b) 1,0,1
		c) 0,1,0
		d) 0,0,0
		e) 3,3,3	

4 (Unit 1 Topic)	Which of the following functions has 3 outputs?	a) void foo(int x, int y, int z) b) int foo(int x, int y, int z) c) int foo(int &x, int &y, int z) d) void foo(int x, int y, int &z) e) int foo(int &x, int &y, int &z)	

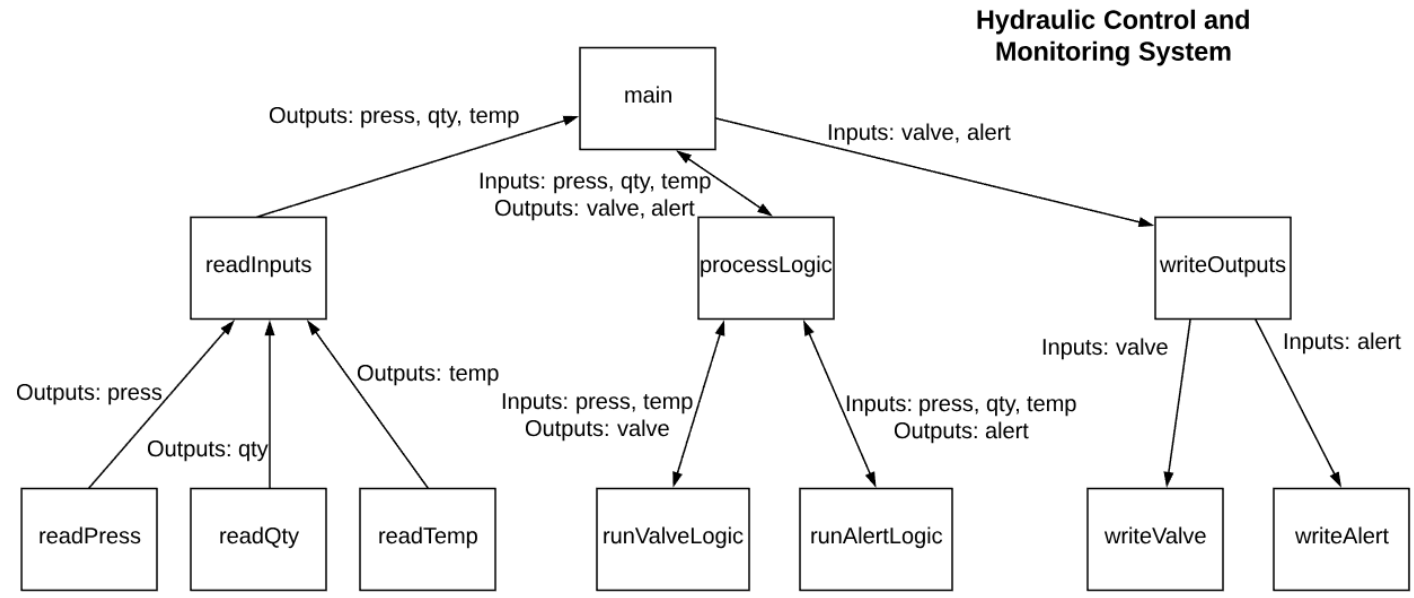
Problem	Question	Choices	Answer
5 (Unit 1 Topic)	When should the return type of a function be "int"?	a) If the function will display an integer using cout b) If the function has no output parameters c) If the function has an output of data type integer d) If the function has an input of data type integer e) The function performs calculations using integers	

6
(Unit 1 Topic)
	What is wrong with the following code:
	
	if (option = 2);
	{
	runOption2();
	}
	else if (option = 3);
	{
	runOption3();
	}
	else (option = 4);
	{
	runOption4();
	}
		a) Semicolons should not be put after the ()'s
		b) Boolean expression should not be added to the else case
		c) = is not a boolean operator
		d) Options (a) and (b)
		e) Options (a), (b), and (c)	

Problem	Question	Choices	Answer

7
(Unit 1
Topic)
	What is the output of the following code:
	
	#include <iostream>
	using namespace std;
	
	bool passClass(int fullGrade, int finalExamGrade)
	{
	  if (fullGrade >= 75)
	  {
	  return true;
	  }
	  else if (finalExamGrade > 90)
	  {
	  return true;
	  }
	  else
	  {
	  return false;
	  }
	}
	
	int main()
	{
	  cout << passClass(72, 82) << “,”
	  << passClass(64, 91) << “,”
	  << passClass(80, 50);
	  return 0;
	}
		a) 0,0,0
		b) 0,1,1
		c) 1,0,1
		d) 1,1,0
		e) 0,0,1
		
		NOTE: Remember that false = 0 and true = 1	

For questions 8 through 12 use the following structure chart:



Problem	Question	Choices	Answer
8	How many function inputs does the processLogic function receive?	a) 1 b) 2 c) 3 d) 4 e) 5	
9	How many functions does the readInputs function call?	a) 0 b) 1 c) 2 d) 3 e) 4	
10	How many function outputs does the writeOutputs function generate?	a) 0 b) 1 c) 2 d) 3 e) 4	
11	To write stub code for the program, which of the following function declarations for readInputs match the structure chart?	a) void readInputs(float press, float qty, float temp) b) float readInputs() c) float readInputs(float press, float qty, float temp) d) float readInputs(float &press, float &qty, float &temp) e) void readInputs(float &press, float &qty, float &temp)	

12	If the runAlertLogic function was supposed to return True if either the pressure was less than 10, the quantity was less than 5, or the temperature was less than 0, then what would the return statement (in place of the question marks) be?
	
	bool runAlertLogic(float press, float qty, float temp)
	{
	return ???????;
	}
		a) ((press < 10.0) && (qty < 5.0) && (temp < 0.0))
		b) ((press < 10.0) || (qty < 5.0) || (temp < 0.0))
		c) ((press <= 10.0) && (qty <= 5.0) && (temp <= 0.0))
		d) ((press <= 10.0) || (qty <= 5.0) || (temp <= 0.0))
		e) ((press == 10.0) || (qty == 5.0) || (temp == 0.0))	

Problem	Question	Choices	Answer

13	What is the output of this program:
	
	float computeAverage(float sum, int count)
	{
	assert(count > 0);
	float avg = sum / count;
	return avg;
	}
	
	int main()
	{
	float result = computeAverage(20,4);
	cout << result;
	
	return 0;
	}
		a) Program will display an assert error and abort (i.e. stop running) without displaying an average.
		b) Program will display an assert error and an average of 5.
		c) Program will display an average of 5
		d) Program will display an assert error and an average of 0.
		e) Program will display and average of 0	

14	When developing software, what order should be followed in doing the following tasks: 1. Write stub code for all functions 2. Create a structure chart to identify all functions 3. Implement a single function 4. Write driver code in the main function to test a single function	a) 1, 2, 3, 4 b) 2, 1, 3, 4 c) 3, 4, 1, 2 d) 2, 3, 4, 1 e) 3, 1, 2, 4	
15	What is the <u>best</u> loop for the following scenario: You need to display a menu to the user and ask them to make a selection. You will run a different function for each menu option. After running the function, the user will be prompted with the menu again. This will continue until the user selects the menu option to quit.	a) For Loop b) While Loop c) Do While Loop d) Infinite Loop e) If Loop	
16	What is the <u>best</u> loop for the following scenario: You need to run several functions that perform failure detection logic <u>only</u> when the airplane is in the air. When the functions are completed, they should be repeated again so long as the airplane is still in the air. This will continue until the airplane is no longer in the air.	a) For Loop b) While Loop c) Do While Loop d) Infinite Loop e) If Loop	

Problem	Question	Choices	Answer

17	What is the output of the following loop:
	
	int x = 100;
	while (x > 0)
	{
	  cout << x << endl;
	  x--;
	}
		a) Print the numbers from 100 to 1
		b) Print out the numbers 1 to 100
		c) Print the numbers 100, 101, 102, forever (infinite loop)
		d) Print out the numbers 0 to 100
		e) Print out nothing	

18	What is the output of the following loop:
	
	int x = 1;
	while (x > 100)
	{
	  cout << x << endl;
	  x++;
	}
		a) Print the numbers from 100 to 1
		b) Print out the numbers 1 to 100
		c) Print the numbers 100, 101, 102, forever (infinite loop)
		d) Print out the numbers 0 to 100
		e) Print out nothing	

19	What is the output of the following loop:
	
	for (int i=0; i<100; i++)
	{
	  if (i % 2 == 0)
	  {
	  cout << i << endl;
	  }
	}
		a) Print out even numbers from 0 to 100
		b) Print out numbers from 0 to 99
		c) Print out even numbers 2 to 98
		d) Print out numbers from 0 to 99
		e) Print out even numbers from 0 to 98	

20	What is the output of the following loop:
	
	for (int i=0; i>100; i++)
	{
	  cout << 2 * i << endl;
	}
		a) Print out nothing
		b) Print out infinite list of even numbers beginning with 0
		c) Print out even numbers from 0 to 98
		d) Print out even numbers from 0 to 198
		e) Print out numbers from 0 to 100	

21	What is the output of the following loop:
	
	int x = 0;
	do
	{
	  cout << x << endl;
	  x++;
	}
	while (x > 100);
		a) Print out nothing
		b) Print the number 0
		c) Print the numbers 0 to 99
		d) Print the numbers 0 to 100
		e) Print out infinite list of numbers beginning with 0	

Problem	Question	Choices	Answer

22	What condition should be added (in place of the question marks) to execute the display function 10 times.
	
	for (int count=0; ???????; count++)
	{
	display();
	}
		a) count == 10
		b) count = 10
		c) count <= 10
		d) count < 10
		e) count >= 10	

23	What is the output of the following code:
	
	int product = 1;
	for (int i=1; i<5; i++)
	{
	product *= i;
	}
	cout << product;
		a) 24
		b) 120
		c) 1
		d) 4
		e) 10	

24	How many times will “test” be displayed?
	
	for (int i=-10; i<10; i++)
	{
	cout << “test” << endl;
	}
		a) 21
		b) 20
		c) 19
		d) 10
		e) 0	

25	What value is printed out in the following code:
	
	int x;
	for (x = 1; x <= 10; x++)
	{
	}
	cout << x;
		a) 9
		b) 10
		c) 11
		d) 12
		e) 13	