Review Test Submission: Exam - 2

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Course	20 SUMMER CSCE 121 398: INTRO PGM DESIGN CONCEPT
Test	Exam - 2
Started	7/16/20 10:02 AM
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Due Date	7/16/20 11:30 AM
Status	Completed
Attempt Score	82.5 out of 100 points
Time Elapsed	35 minutes
Instructions	This exam is designed to take 30 minutes. It will be given in the lecture portion of the class. All accommodations will be handle during the scheduled class time. You will be presented one question at a time with no going back. This is part 1 of the exam - Part 2 will be in the scheduled Lab time. You must be present with your camera on to receive credit.
Results Displayed	All Answers

Question 1

2.5 out of 2.5 points

Which corrects the logic error in the following program?

```
void FindPrevNext (int x, int prev, int next) {
 prev = x - 1;
 next = x + 1;
}
int main () {
 int x = 10;
 int y;
 int z;
 FindPrevNext (x, y, z);
 cout << "Previous = " << y << ", Next = " << z;
 return 0;
}
```

Answers:
a. The variables prev and next should be passed by reference

b. The variables y and z should be initialized to 0

c. The function FindPrevNext() should have a return statement for variables prev and next

d. prev and next should be initialized in FindPrevNext()

Question 2

2.5 out of 2.5 points

What is the output?

```
#include <iostream>
using namespace std;
const double LB_PER_KG = 2.2;
double KgsToLbs(double kilograms) {
 double pounds;
 pounds = kilograms * LB_PER_KG;
 return pounds;
}

int main() {
 double pounds;
 pounds = KgsToLbs(10);
 cout << pounds;
 return 0;
}
```

Answers:
a. 22

b. No output: LB_PER_KG causes a compiler error due to being outside any function

c. No output: Global variable declared as const causes compiler error

d. No output: variable pounds declared into two functions causes compiler error

Question 3

0 out of 2.5 points

The following program guesses the hidden number known by the user. Which XXX completes the recursive function?

```
#include <iostream>
using namespace std;
```

```
void GuessNumber(int lowVal, int highVal) {
 int midVal;
 char userAnswer;


 midVal = (highVal + lowVal) / 2


 cout << "Is it " << midVal << "? (l/h/y): "
 cin >> userAnswer

 if( (userAnswer != 'l') && (userAnswer != 'h') ) {
 cout << "Thank you!" << endl;
 }
 else {
 XXX
 }
 else {
 GuessNumber(midVal + 1, highVal);
 }
 }
}


int main() {
 cout << "Choose a number from 0 to 100." << endl
 cout << "Answer with:" << endl
 cout << " l (your num is lower)" << endl
 cout << " h (your num is higher)" << endl
 cout << " any other key (guess is right)." << endl
 GuessNumber(0, 100)
 return 0
}
```

Answers:

```
    if (userAnswer == 'h') {
a.  GuessNumber(lowVal, midVal);

    if (userAnswer == 'l') {
b.  GuessNumber(lowVal, midVal);

    if (userAnswer == 'l') {
c.  GuessNumber(midVal + 1, lowVal);

    if (userAnswer == 'h') {
d.  GuessNumber(midVal + 1, lowVal);
```

Question 4

2.5 out of 2.5 points

Given a function with one vector parameter scores. How should the parameter be defined if scores may be very large, and the function will modify the parameter?

Answers:

a. Constant, and pass by reference

b. Constant, and pass by value

c. Not constant, and pass by reference

d. Not constant, and pass by value

Question 5

2.5 out of 2.5 points

A program progToCheckNumbers has two command-line arguments, one for an input file and a second for an output file. Which command will run the program with input file inData.txt and output file outData.txt.

Answers:

a. inData.txt outData.txt progToCheckNumbers.exe

b. progToCheckNumbers inData outData

c. progToCheckNumbers inData.txt outData.txt

d. inData.txt outData.txt progToCheckNumbers

Question 6

2.5 out of 2.5 points

Function CalcSum() was copied and modified to form the new function CalcProduct(). Which line of the new function contains an error?

```
int CalcSum(int a, int b) {
 int s;
 s = a + b;
 return s;
}
int CalcProduct(int a, int b) {
 int p; // Line 1
 p = a * b; // Line 2
 return s; // Line 3
}
```

Answers:
a. Line 1
b. Line 2
c. Line 3
d. None of the lines contains an error

Question 7

2.5 out of 2.5 points

When an exception is thrown within a function and it is not caught within that function, the function is immediately exited and the calling function is checked for a _____.

Answers:
a. user instruction
b. try
c. different value
d. handler

Question 8

2.5 out of 2.5 points

Which XXX tests the input value 4 using a print statement (without using assert)?

```
int SquareNum(int origNum) {
 return origNum * origNum;
}
int main() {
 cout << "Testing started" << endl;
 XXX;
 cout << "Testing completed" << endl;
 return 0;
}
```

Answers:
a. test(4)
b. SquareNum(4)
c. cout << "4, expecting 16, got: " << test(4) << endl
d. cout << "4, expecting 16, got: " << SquareNum(4) << endl

Question 9

2.5 out of 2.5 points

The following program generates an error. Why?

```
void PrintSum(int num1, int num2) {
 cout << num1 + num2;
}
int main() {
```

```
 int y;
 y = PrintSum(4, 5);
 return 0;
}
```

Answers:
a. The void function is missing a "return;" statement.
b. The values 4 and 5 cannot be passed directly to PrintSum()
c. main() has a return statement that returns the value 0
d. PrintSum() has void return type, so cannot be assigned to a variable

Question 10

2.5 out of 2.5 points

Which XXX complete the program to calculate the volume of a cone?

```
XXX
int main () {
 double coneVol;
 coneVol = ConeVolume(2, 4);
 cout << coneVol;
 return 0;
}

double ConeVolume (double r, double h) {
 return (0.33) * 3.14 * ComputeSquare(r) * h;
}
double ComputeSquare (double r) {
 return r * r;
}
```

Answers:
a. (nothing)
b. double ConeVolume, ComputeSquare;

   double ConeVolume();
c. double ComputeSquare();

   double ConeVolume (double r, double h);
d. double ComputeSquare (double r);

Question 11

2.5 out of 2.5 points

What is the output?

```
void IsEven(int num) {
 int even;
 if (num % 2 == 0) {
 even = 1;
 }
 else {
 even = 0;
 }
}

int main() {
 IsEven(7);
 cout << even;
 return 0;
}
```

Answers:
a. 0
b. 1
c. No output: Call to IsEven() fails due to no return value
d. No output: A compiler error occurs due to unknown variable even

Question 12

2.5 out of 2.5 points

Given a function with one vector parameter ages. How should the parameter be defined if ages may be very large, and the function will not modify the parameter?

Answers:
a. Constant, and pass by reference
b. Constant, and pass by value
c. Not constant, and pass by reference
d. Not constant, and pass by value

Question 13

2.5 out of 2.5 points

Which keyword is used to declare a header file?

Answers:
a. include
b. exclude
c. string
d. namespace

Question 14

2.5 out of 2.5 points

Which XXX condition generates the following output? Not found

```
#include <iostream>
#include <string>
#include <vector>
using namespace std;


int BinarySearch(vector<int> numberList, int element, int lowVal, int highVal) {
 int midVal;
 if (XXX) {
 midVal = (highVal + lowVal) / 2;
 if (numberList.at(midVal) == element) {
 return midVal;
 }
 else if (numberList.at(midVal) > element) {
 return BinarySearch(numberList, element, lowVal, midVal - 1);
 }
 else {
 return BinarySearch(numberList, element, midVal + 1, highVal);
 }
 }
 else {
 return -1;
 }
}


int main() {
 vector<int> numberList(0);
 int element = 20;
 int matchPos;
 for (int i = 0; i <= 10; i++) {
 numberList.push_back(i);
 }
 matchPos = BinarySearch(numberList, element, 0, numberList.size() - 1);
 if (matchPos >= 0) {
 cout << "Found at position " << matchPos << "." << endl;
 }
 else {
 cout << "Not found. " << endl;
 }
 return 0;
}
```

Answers:
a. lowVal >= highVal
b. lowVal == highVal
c. lowVal <= highVal
d. lowVal + highVal == 0

Question 15

2.5 out of 2.5 points

How many function calls exist in the following code?

```
int Calc1 (int a, int b) {
 return a + b / 2;
}
int Calc2 (int a, int b) {
 return a * b / 100;
}
int main () {
 int x;
 int y;
 x = Calc1 (5,3);
 cout << x;
 y = Calc2 (5,3);
 cout << y;
 cout <<
 Calc2 (5,3);
}
```

Answers:
a. 2
b. 3
c. 4
d. 5

Question 16

2.5 out of 2.5 points

Which XXX adds indent in the output statements for debugging a recursive function to find the value of N k ?

```
#include <iostream>
using namespace std;


int NPowerK(int n, int k, string indent) {
 int value;
 if (k == 0) {
 cout << indent << "Base Condition Reached: K = 0" << endl;
 return 1;
 }
 else {
 cout << indent << "Recursive call: K = " << k - 1 << endl;
 XXX;
 cout << indent << "Recursion Return Value for K = " << k - 1 << endl;;
 return n * value;
 }
}


int main () {
 int n = 2;
 int k = 2;
 string indent = " ";
 cout << n << " to the power " << k << " = " << NPowerK(n,k,indent) << endl;
 return 0;
}
```

Answers:
a. value = NPowerK(n, k, indent)
b. value = NPowerK(n, k + 1, indent + " ")
c. value = NPowerK(n, k - 1, indent + " ")
d. value = NPowerK(n, k + 1, indent - " ")

Question 17

2.5 out of 2.5 points

Given the following function. To change the function to return the product instead of the sum, how many lines of code need to be changed?

```
int Calculate(int a, int b) {
 return a + b;
}
int main() {
 cout << Calculate(3, 4);
 cout << Calculate(5, 2);
 cout << Calculate(6, 7);
 return 0;
}
```

Answers:
a. 1
b. 2
c. 3
d. 4

Question 18

0 out of 2.5 points

What is the output if the program is run as: a.out 5 10 15 ?

```
int main(int argc, char* argv[]) {
 int sum;
 sum = atoi(argv[1]) + atoi(argv[2]);
 cout << sum << endl;
 return 0;
}
```

Answers:
a. 5
b. 10
c. 15
d. 25

Question 19

0 out of 2.5 points

Identify the correct statement.

Answers:
a. A fixed number of indents should be added for each iteration.
b. A different number of indents should be added on each iteration.
c. A print statement should be left-aligned on each iteration.
d. A print statement should be right-aligned on each iteration.

Question 20

2.5 out of 2.5 points

What is the output?

```
void WaterTemperatureForCoffee(int temp) {
 if (temp < 195) {
 cout << "Too cold.";
 }
 else if ((temp >= 195) && (temp <= 205)) {
 cout << "Perfect temperature.";
 }
 else if (temp > 205) {
 cout << "Too hot.";
 }
}
int main() {
 WaterTemperatureForCoffee(205);
 WaterTemperatureForCoffee(190);
 return 0;
}
```

Answers:
a. Too cold.
b. Perfect temperature.

Perfect temperature.
c. Too cold.
d. Perfect temperature.Too cold.

Question 21

2.5 out of 2.5 points

Which of the following statements is true for the following code?

```
class MyParent {
 …
}
```

```
class MyChild : protected MyParent {
 …
}
```

Answers:

a.
Public, private, and protected members of MyParent are accessible as protected members of MyChild.

b.
Public and protected members of MyParent are accessible as protected members of MyChild.

c.
Public, private, and protected members of MyParent are accessible as public members of MyChild.

d.
Public and protected members of MyParent are accessible as public members of MyChild.

Question 22

0 out of 2.5 points

Which XXX overrides the function SetName()?

```
class Players {
 public:
 void SetName(string newName) { … }
 private:
 void SetAge(int newAge) { … }
};


class SoccerPlayers: public Players {
 public:
 void SetName() {
 XXX
 }
};

int main() {
 SoccerPlayers playerObject;
 playerObject.SetName();
 return 0;
}
```

Answers:
a. Players::SetName();
b. playerObject.SetName("Tim Allen");
c. Players::SetName("Proxy");
d. playerObject.SetName();

Question 23 2.5 out of 2.5 points

Which operator is overloaded to copy objects?

Answers:
a. Compound assignment operator
b. Relational operator
c. Assignment operator
d. Pointer operator

Question 24 2.5 out of 2.5 points

The copy constructor makes a new copy of all data members (including pointers), known as a _____.

Answers:
a. neat copy
b. shallow copy
c. deep copy
d. reference copy

Question 25 2.5 out of 2.5 points

Which is true about arrays and functions?

Answers:
a. Arrays cannot be passed to functions
b. Passing an array to a function creates a copy of that array within the function
c. An array is automatically passed to a function as a pointer
d. A programmer must first make a copy of an array to pass the array to a function

Question 26 2.5 out of 2.5 points

What line of code assigns a char variable outputGames with the value the gamesPointer points to?

```
char userGames = 'B';
char* gamesPointer;
```

Answers:
a. outputGames = gamesPointer;

b. outputGames = *gamesPointer;

c. someChar = &gamesPointer;

d. gamesPointer = outputGames;

Question 27

2.5 out of 2.5 points

Which of the following is the LinkedList class destructor?

Answers:

a. void ~LinkedList(delete);

b. ~LinkedList(int);

c. void ~LinkedList();

d. ~LinkedList();

Question 28

2.5 out of 2.5 points

In a linked list, a node is comprised of a(n) _____.

Answers:

a. data element and a pointer to the next node

b. member functions and a structure

c. data element and a structure

d. object and a pointer to the next node

Question 29

2.5 out of 2.5 points

Which of the following statements describes an abstraction?

Answers:

a. Hiding the implementation and showing the important features

b. Hiding the implementation and the important features

c. Showing the implementation and the important features

d. Showing the implementation and hiding the important features

Question 30

2.5 out of 2.5 points

Which of the following statements is true about a class' member function definition?

Answers:

a.
A function definition provides a class name, return type, arguments, and the function's statements.

b.
A function definition provides the function’s name, return type, and arguments.

c.
A programmer first defines a function and then declares the member functions.

d.
A modulus operator is used preceding the function’s name in a function definition.

Question 31

0 out of 2.5 points

Which of the following statements is not true for a static data member?

Answers:
a. It is a data member of the class.
b. It is a data member of each class object.
c. It is independent of any class object.
d. It is declared inside the class definition.

Question 32

0 out of 2.5 points

Identify the missing statement.

```
#include <iostream>
#include <string>
#include <vector>
// MISSING SYNTAX
using namespace std;


class Cars {
 //code for the class data members and member functions
}


bool operator<(const Cars&lhs, const Cars&rhs) {
 return lhs.GetCarPrice() < rhs.GetCarPrice ();
}


int main() {
 vector<Cars> carsInTheShowroom;
 Cars newCars;
 // Code for adding cars' details into the vector
 //Code for sorting the cars based on their price in the vector
 sort(carsInTheShowroom.begin(), carsInTheShowroom.end());
 // Code for displaying sorted cars' details from the vector
}
```

Answers:
a. No additional library required
b. #include <algorithm>
c. #include <sort>
d. #include <math>

Question 33

2.5 out of 2.5 points

A commuter swipes a public transport card at a kiosk and sees his account balance displayed on the screen. The commuter would be viewing an abstraction if _____.

Answers:
a. the machine is the only place on which the information is stored
b. there is other information about his account that is not displayed onscreen
c. all the available information is displayed onscreen
d. the card is the only place on which the information is stored

Question 34

2.5 out of 2.5 points

What is output?

```
#include <iostream>
using namespace std;


class Base {
 int value;
 public:
 Base(int value):value(value) {
 cout << "The number is " << value;
 }
};


int main( ) {
 Base il(20);
 return 0;
}
```

Answers:
a. The number is value
b. The number is 0

c. The number is 20

d. The number is

Question 35

2.5 out of 2.5 points

Which of the following is true for overloading a class constructor?

Answers:
a. The return types of the constructors should be different.

b. The parameter types of the constructors should be different.

c. The name of the constructor should be different.

d. The access scope of the constructors should be different.

Question 36

2.5 out of 2.5 points

Which of the following statements is the correct replacement for member initialization in the following code?

```
#include <iostream>
using namespace std;


class PromNight {
 public:
 PromNight();
 void Print() const;


 private:
 int boys;
 int girls;
};


PromNight::PromNight() {
 boys = 100;
 girls = 200;
}


void PromNight::Print() const {
 cout << "boys: " << boys << endl;
 cout << "girls: " << girls << endl;
}


int main() {
 PromNight myClass;
 myClass.Print();
 return 0;
}
```

Answers:
a. PromNight::PromNight() :: boys(100), girls(200) { }
b. PromNight::PromNight() : boys = 100, girls = 200 { }
c. PromNight::PromNight():boys(100), girls(200){}
d. PromNight::PromNight() :: boys = 100, girls = 200 { }

Question 37

2.5 out of 2.5 points

What is output?

```
#include <iostream>
using namespace std;


class School {
 public:
 School( );
 static int getNextId();
 private:
 int id = 0;
 static int nextId;
};


School::School( ) {
 id = nextId;
 nextId += 1;
}
int School::getNextId() {
 return nextId;
}
int School::nextId = 0;


int main( ) {
 School( );
 cout << School::getNextId() << " ";
 School( );
 cout << School::getNextId() << " ";
```

```
 School( );
 cout << School::getNextId() << " ";
 School( );
 cout << School::getNextId() << " ";


 return 0;
}
```

Answers:
a. 3 2 1 0
b. 0 1 2 3
c. 4 3 2 1
d. 1 2 3 4

Question 38

2.5 out of 2.5 points

What is output?

```
#include <iostream>
using namespace std;


class Shapes {
 public:
 void Print();
 Shapes(int x);
 private:
```

```
 int sides = 4;
};


Shapes::Shapes(int x) {
 this->sides = x;
}


void Shapes::Print() {
 if(this->sides == 4) {
 cout << "It's a Square!" << endl;
 }
 else {
 cout << "Oops!";
 }
}


int main() {
 Shapes s(7);
 s.Print();
 return 0;
}
```

Answers:

a. Oops, It's a Square!

b. Oops!

c. It's a Square!

d. It's a Square, Oops!

Question 39

0 out of 2.5 points

For the given outline, identify the correct statement for defining classes for a program that stores electronic items' details. The program will have an Electronic class with item code, item description, and item price. An item may be a gaming item with console details and brand.

Answers:

a.
Create a Gaming class as separate files and then an Electronic class which includes the Gaming.h file.

b.
Create an Electronic class as separate files and then a Gaming class which includes the Electronic.h file.

c.
Create separate files for the classes Electronic and Gaming and include both the .h files in main.cpp.

d. Create one file containing all the classes and their definitions.

Question 40

2.5 out of 2.5 points

The _____ member access operator is used to access a member using the this pointer.

Answers:

a. ::

b. ->

c. .

d. :

Tuesday, August 4, 2020 2:58:25 PM CDT

← OK