**Salahadin University** **Final Exam – Second Attempt** **Time : 3 Hours**
**College of Engineering** **Subject: OOP**
**Electrical Engineering Dept.** **3rd Year C/C**

**Q: / Answer all the following Multiple choice questions: [2 Marks for each question]**

1) In procedural programming language would consist of ..... and..... which always make it difficult to understand .
   a) Data abstraction, Encapsulation
   b) Data migration, Data abstraction.
   c) Data definition, Procedure calls
   d) Data elimination, Procedure tracking.

2) OOP stands for .....
   a) Optional Object Programming.
   b) Ordered Optional Programming.
   c) Object Oriented Programming.
   d) Online Option Programming

3) True statement about Class and structure in C++ is
   a) Way of creating objects of class and structure are different
   b) Way of inheriting class and structure are different
   c) Default access specifier is private in class and public in structure
   d) None

4) The OOPs concept in C++, exposing only necessary information to users or clients is known as .....
   a) Abstraction
   b) Encapsulation
   c) Data hiding
   d) Hiding complexity

5) The characteristics which describe the object is called .....
   a) Attributes.
   b) Arbitration.
   c) Arbitrary.
   d) Functionality.

6) OOP provides us with the concept of ..... as it enables us to derive new classes from already existing base classes with similar characteristics and behaviors.
   a) Encapsulation
   b) Inheritance
   c) Abstraction
   d) Polymorphism.

7) A structure type in C++ is called .....
   a) Object
   b) Variable
   c) Struct
   d) Function

8) A struct is heterogeneous in that it can be composed of data of .....
   a) different types.
   b) same types
   c) only int and floating point types
   d) char types only

9) OOP supports information hiding or ..... where objects characteristics and behaviors are hidden to the outside world.

a) Abstraction
b) Inheritance.
c) Polymorphism.
d) Encapsulation

10) strcpy is used to print ..... of ..... type.

a) variables, int.
b) arrays, char
c) functions, char
d) structures, void

11) Suppose that you have this structure definition, ***struct Date { int day; int month; int year };*** , the statements inside the two curly brackets are known as .....

a) Variables of the structure.
b) New structure type variables.
c) Objects of the structure.
d) Members of Date structure.

12) Complex data structures can be formed by defining .....

a) different variables.
b) functions.
c) using it in classes.
d) arrays of structs.

13) Class is simply an extension of C structure , but class is more powerful because we can include ..... along with the data members in the class definition.

a) Arrays
b) Functions
c) Pointers
d) Header files.

14) The ..... represents the Class interface to the outside world.

a) public section
b) object
c) data functions
d) data members

15) In class declaration, if no section label mentioned , then the ..... label is default.

a) Protected.
b) Public.
c) Private.
d) No label.

16) As the number of functions increases inside the class declarations, we can do the following.....

a) We can merge many functions inside one function.
b) We cannot perform such task inside the class declarations.
c) We can make friend class to resolve the problem.
d) Defining the function declarations inside the class and then defining the body outside of class.

17) Suppose that you have this sample of code ***int rectangle::area(),*** the ( **::** ) is called .....

a) Double colon operator
b) Scope resolution operator
c) Global scope operator
d) Screen resolution Operator

18) Suppose that you have this sample of code ***int rectangle::area(),*** the ( ***rectangle*** ) identifier denotes the .....

a) function name.
b) class identifier
c) variable name
d) object name

19) For each instances of class data type, we should perform initialization of the data members declared inside the class. In order to avoid this annoying procedure we can use .....

a) Destructors
b) Dynamic variables.
c) Static variables.
d) Constructors

20) A ..... is a function that is executed automatically whenever a new instance if the given class is declared.

a) Class destructor
b) class section
c) class function
d) Class constructor

21) When the class constructor of integer type is declared, we should .....

a) return an integer type data at the end of the constructor definition.
b) return the initialized variables through the return function.
c) use the destructor to return the allocated memory to the heap.
d) perform correction on the constructor declaration because constructor has no type.

22) Suppose that you have this sample of code , ***class data { public: int area; data() { area=0;} data (int a , int b) { area=a*b;}};*** the underlined section in the code is called .....

a) destructor
b) function
c) default constructor
d) friend function

23) Where is the derived class is derived from?

a) derived
b) base
c) both derived & base
d) None of the mentioned

24) Which operator is used to declare the destructor?

a) #
b) ~
c) @
d) $

25) Pick out the correct statement about multiple inheritance.

a) Deriving a class from one direct base class
b) Deriving a class from more than one direct base class
c) Deriving a class from more than one direct derived class
d) None of the mentioned

26) What is the syntax of inheritance of class?

a) class name
b) class name : access specifer
c) class name : access specifer class name
d) none of the mentioned

27) How many constructors can present in a class?

a) 1
b) 2
c) 3
d) multiple

28) What should be the name of constructor?

a) same as object
b) same as member
c) same as class
d) none of the mentioned

29) What is a template?

a) A template is a formula for creating a generic class
b) A template is used to manipulate the class
c) A template is used for creating the attributes
d) None of the mentioned

30) How to declare a template?

a) tem <>
b) <> temp
c) template < >
d) none of the mentioned

31) What is the output of this program?

```
template<typename T>
void print_mydata(T output)
{
    cout << output << endl;
}
int main()
{
    double d = 5.5;
    string s("Hello World");
    print_mydata( d );
    print_mydata( s );
    return 0;
}
```

a) 5.5 Hello World
b) 5.5
c) Hello World
d) None of the mentioned

32) What is the output of this program?

```
template<typename type>
type Max(type Var1, type Var2)
{
    return Var1 > Var2 ?       Var2;
}
int main()
{
    int p;
    p = Max(100, 200);
    cout << p << endl;
    return 0;
}
```

a) 100
b) 200
c) 300
d) 100200

33) Which is called on allocating the memory for objects?

a) destructor
b) constructor
c) method
d) none of the mentioned

34) Choose the right option if you have this declarations : ***string* x, y;***

a) x is a pointer to a string, y is a string
b) y is a pointer to a string, x is a string
c) both x and y are pointer to string types
d) none of the mentioned

35) What is the output of this program?

```
struct sec
{
    int a;
    char b;
};
int main()
{
    struct sec s ={25,50};
    struct sec *ps =(struct sec *)&s;
    cout << ps->a << ps->b;
    return 0;
}
```

a) 252
b) 253
c) 254
d) 262

36) Pick out the correct statement about override.

a) Overriding refers to a derived class function that has the same name and signature as a base class virtual function
b) Overriding has different names
c) Overriding refers to a derived class
d) None of the mentioned

37) Suppose that you have this sample of code , ***class data { public: int area; data() { area=0;} <u>data (int a , int b)</u> { area=a*b;}};*** the underlined section in the code is called .....

a) overloaded function
b) overwriting function
c) overloaded constructor
d) overwriting constructor

38) Suppose that you have this sample of code ,***class A { }; <u>class B</u> : public A { };*** the underlined part of the code is known as .....

a) inherited class
b) base class
c) overloaded class
d) normal class

39) Suppose that you have this sample of code ,***class A { }; class B : <u>public</u> A { };*** the public keyword tells the compiler that .....

a) all the public members of A class will be public members of B.
b) all the public members of A class will be private members of B.
c) all the private members of A class will be public members of B.
d) all the public members of A class will be protected members of B.

40) Suppose that you have this sample of code ,***<u>class A { };</u> class B : public A { };*** the underlined part of the code is known as .....

a) inherited class
b) base class
c) normal class
d) overloaded class

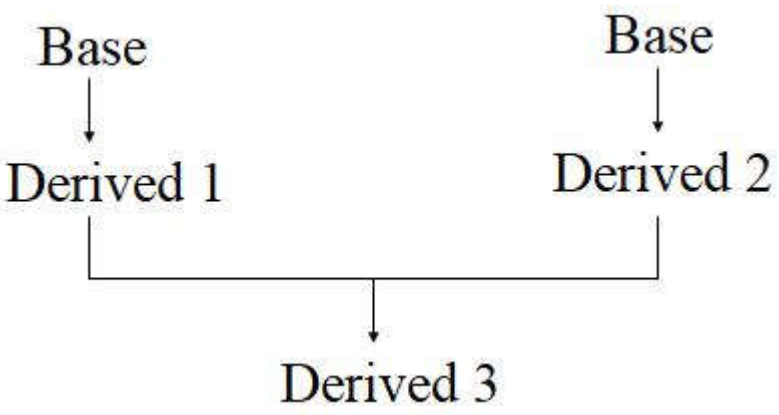
41) In class inheritance , when the access specifier is private, which of the following is correct?

a) public members of derived become private members of base.
b) public members of base become private members of derived.
c) private members of base become private members of derived.
d) public members of base become private members of derived.

42) In class inheritance , when the access specifier is private, which of the following is incorrect?

a) Private members of the base will be inaccessible in derived class.
b) Public members of the base will be private in derived class
c) Protected members of the base will be private in derived class.
d) Public members of the base will be inaccessible in derived class

43) In the inheritance form shown, you will face a potential problem which is .....




a) Base is inherited twice by Derived 1
b) Base is inherited twice by Derived 2
c) Base is inherited twice by Derived 3
d) Derived 1 is inherited by Derived 3

44) When there are multiple functions with same name but different parameters then these functions are said to be

a) overwritten
b) overestimated
c) overloaded
d) uploaded

45) What will happen in this code?

```
int a = 100, b = 200;
int *p = &a, *q = &b;
p = q;
```

a) b is assigned to a
b) p now points to b
c) a is assigned to b
d) q now points to a

46) Which of the following correctly declares an array?

a) int array[10];
b) int array;
c) array{10};
d) array array[10];

47) What is the index number of the last element of an array with 9 elements?

a) 9
b) 8
c) 0
d) Programmer-defined

48) Which of the following accesses the seventh element stored in array?

a) array[6];
b) array[7];
c) array(7);
d) array;

49) What will be the output of this program?

```
int array1[] = {1200, 200, 2300, 1230, 1543};
int array2[] = {12, 14, 16, 18, 20};
int temp, result = 0;
int main()
{
    for (temp = 0; temp < 5; temp++)
    {
        result += array1[temp];
    }
    for (temp = 0; temp < 4; temp++)
    {
        result += array2[temp];
    }
    cout << result;
    return 0;
}
```

a) 6553
b) 6533
c) 6522
d) 12200

50) An ..... is a series of elements of the same type placed in contiguous memory locations that can be individually referenced by adding an index to a unique identifier.

a) stuct
b) array
c) function
d) class

Good Luck

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