Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	1

Question:	What is the outputof the following program
	#include<iostream.h>
	int main()
	{
	unsigned int i;
	for(i = 1; i<= 100; i++)
	if(i & 0x00000001)
	cout<<("%d... ", i);
	return 0;
	}

Answer Choices	
Choice 1:	All the numbers from 1 to 100
Choice 2:	Compilation error
Choice 3:	All the even numbers from 1 to 100
Choice 4:	All the odd numbers from 1 to 100
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	(Mention name of the book, author, ISBN / Website URL)

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	2

Question:	What is the output of the following program
	
	#include<iostream.h>
	#include <windows.h>
	int main(void)
	{
	system("c:\\windows\\notepad.exe");
	return 0;
	}

Answer Choices	
Choice 1:	There is no such header as <windows.h> in C++
Choice 2:	Displays the string "c:\\windows\\notepad.exe"
Choice 3:	Opens the notepad in windows
Choice 4:	“system” is not a keyword and couldnot be used
Correct Answer:	Choice 3

Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	3

Question:	What is the output of the following program
	#include<iostream.h>
	class base
	{
	public:
	virtual void fun()
	{
	cout<<"In Base::fun()";
	}
	void fun1()
	{
	fun();
	}
	};
	class derived:public base
	{
	public:
	void fun()
	{
	cout<<"In derived::fun()";
	}
	};
	
	int main()
	{
	derived d;
	d.fun1();
	return 0;
	}

Answer Choices	
Choice 1:	Error: as there is no function fun1() in the derived class
Choice 2:	In derived::fun()
Choice 3:	In base::fun()
Choice 4:	Error: Cannot call the method of the base class.
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)

Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	4

Question:	What is the output of the following program
	
	#include<iostream.h>
	int main()
	{
	int a=10, b=20;
	b = a+ b-(a=b);
	cout<<a<<b;
	return 0;
	}

Answer Choices	
Choice 1:	Error: Invalid expression
Choice 2:	10 20
Choice 3:	20 10
Choice 4:	Error: lvalue required
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	5

Question:	What is the output of the following program
	
	#include<iostream.h>
	int main()
	{
	static int i=5;
	while(i=5)
	{
	cout<<i;
	i--;
	}
	return 0;
	}

Answer Choices	
Choice 1:	5 4 3 2 1
Choice 2:	5
Choice 3:	Infinite loop
Choice 4:	Compilation error
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	6

Question:	What is the output of the following program
	#include<iostream.h>
	
	int main()
	{
	float i=10.35f;
	if(i==10.35)
	cout<<"working";
	else
	cout<<"not working";
	return 0;
	}

Answer Choices	
Choice 1:	working
Choice 2:	compilation error: cannot compare float to double
Choice 3:	complies successfully but no output is displayed
Choice 4:	not working
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	7

Question:	What is the output of the following program
	
	#include<iostream.h>
	
	const int MAX = 15;
	int main()
	{
	enum e{a, b, MAX};
	cout<<a<<b<<MAX;
	return 0;
	}

Answer Choices	
Choice 1:	0 1 2
Choice 2:	13 14 15
Choice 3:	1 2 15
Choice 4:	0 1 15
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	8

Question:	What is the output of the following
	
	class Base
	{
	int cNo; char cName[20];
	public :
	void show()
	{ cout<<endl<<"Base Class"; }
	};
	class Derived : public Base
	{
	float dNo;
	public:
	void show()
	{ cout<<endl<<"Derived class";}
	};
	void main(){
	Base b1;
	Derived d1;
	b1.show();

	d1.show();
	Base& b2 = d1;
	b2.show();
	d1.show();
	}

Answer Choices	
Choice 1:	Error : Can not convert Base to Derived
Choice 2:	Base Class Derived Class Base Class Derived Class
Choice 3:	Base Class Derived Class Derived Class Base Class
Choice 4:	Base Class Derived Class Derived Class Derived Class
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	9

Question:	1. What happens
	class X
	{
	int j;
	
	public:
	
	X()
	{
	this->j = 0;
	}
	X(int n)
	{
	this->j = n;
	}
	X(const X& rhs)
	{
	this->j = rhs.j;
	}

	};
	
	int main()
	{
	X x1, x2(5);
	X x3(x2);
	x1 = x3;
	return 0;
	}

Answer Choices	
Choice 1:	**It will compile. Upon execution, the default constructor for 'X' will be called, then the overloaded constructor, and then the copy constructor. The default assignment operator will be used.**
Choice 2:	It will fail during compilation because the copy constructor is attempting to use a const reference to modify a member variable.
Choice 3:	It will compile. Upon execution, the default construct for 'X' will be called, then the overloaded constructor, and then a run-time error will occur when the assignment of x1 = x3 is attempted.
Choice 4:	It will compile. Upon execution, the default constructor for 'X' will be called once, and then the copy constructor will be called twice, with the last call being used to assign x1 = x3.
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	10

Question:	What would be the output of the following
	
	#include <iostream.h>
	
	class Base
	{
	public:
	Base()
	{
	cout<<"Constructor: Base"<<endl;
	}
	virtual ~Base()
	{
	cout<<"Destructor : Base"<<endl;
	}
	};
	
	class Derived: public Base

	{
	public:
	Derived()
	{
	cout<<"Constructor: Derived"<<endl;
	}
	~Derived()
	{
	cout<<"Destructor : Derived"<<endl;
	}
	};
	int main()
	{
	Base *Var = new Derived();
	delete Var;
	return 0;
	}

Answer Choices	
Choice 1:	Constructor : Base Constructor : Base Destructor : Base Destrcutor : Derived
Choice 2:	Constructor : Base Constructor : Derived Destrcutor : Derived
Choice 3:	Constructor : Base Constructor : Derived Destructor : Derived Destrcutor : Base
Choice 4:	None of the above
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	11
Question:	Consider the following, #include <iostream.h> #include <string.h> #include <stdlib.h> void ReadInput (int DataType, void * address)

```
{
  char buffer[30];

  cin.getline(buffer, sizeof(buffer));

  switch (DataType)
  {
  case 1:
    *(int*)address = atoi(buffer);
    break;

  case 2:
    *(float*)address = atof(buffer);
    break;

  case 3:
    strcpy((char*)address, buffer);
    break;
  }
}


int main ()
{
  float x;
  cout << "\nEnter number ";
  ReadInput (2, &x);

  cout << "\nsquare = " << x*x;
return 0;
}
```

What would be output if input provided is 12.5

Answer Choices	
Choice 1:	156.25
Choice 2:	Compilation error: Cannot convert from float to int
Choice 3:	144
Choice 4:	None of the above
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++

Q. No.:	12

Question:	What would be the output of the following
	
	#include <iostream.h>
	int main()
	{
	int a =11;
	int &b=a;
	b=a++;
	a=b++;
	cout<<a<<','<<b;
	return 0;
	}

Answer Choices	
Choice 1:	11, 12
Choice 2:	13, 13
Choice 3:	13, 12
Choice 4:	12, 12
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	13

Question:	Output of the following,
	
	#include <iostream.h>
	#include<string.h>
	class A
	{
	int code;
	char name[20];
	public :
	A()
	{
	code=0;
	strcpy(name,'\0');
	}
	A(int c, char* nm)
	{
	code = c;
	strcpy(name,nm);

```
                }
                A( A& obj)
                {
                        code = obj.code;
                        strcpy(name, obj.name);
                }
        void show();
};
void A::show()
{
        cout<<endl<<"code= "<< code<<endl<< "Name = "<<name;
}
int main()
{
        A obj1(20,"AAA");
        A obj2(obj1);
        obj1.show();
        obj2.show();
return 0;
}
```

Answer Choices	
Choice 1:	code = 20 name = AAA for first and garbage value for second
Choice 2:	code = 20 name = AAA
Choice 3:	will not compile
Choice 4:	Error: cannot assign one object to another
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	14
Question:	what is the result of the following program :

```
#include<iostream.h>
class myclass
{
        private :
                int a,b;
        public:
                void set_ab(int i, int j)
                {
```

```
                        a= i;
                        b= j;
                }
                friend int sum(myclass);
};
int sum(myclass obj)
{
        return obj.a+ obj.b;
}
void main()
{
        myclass c1,c2;
        c1.set_ab(10,20);
        c2.set_ab(40,40);
        cout<<endl<<sum(c1);
        cout<<endl<<sum(c2);
}
```

Answer Choices	
Choice 1:	Error : can't access the member function without a reference to the class
Choice 2:	Error : a non-member function cannot access the data member of the class
Choice 3:	30 80
Choice 4:	Garbage Value
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	15
Question:	Consider,

```
#include<iostream.h>
struct SomeClass
{
        private:
                int x ;
        public:
                SomeClass (int xx):x(xx) {};
};

int main()
{
```

	SomeClass x(10); SomeClass y(x); return 0; } What, if anything, is wrong with the initialization of y in the sample code above?
Answer Choices	
Choice 1:	It is illegal because SomeClass has no copy constructor.
Choice 2:	It is illegal because SomeClass has no public copy constructor
Choice 3:	It is illegal because SomeClass has no default constructor
Choice 4:	There is nothing wrong with the initialization of y. It is perfectly legal
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	16
Question:	class professor {}; class teacher : public virtual professor {}; class researcher : public virtual professor {}; class myprofessor : public teacher, public researcher {}; Referring to the sample code above, if an object of class "myprofessor" were created, how many instances of professor will it contain?
Answer Choices	
Choice 1:	0
Choice 2:	1
Choice 3:	2
Choice 4:	3
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	17

Question:	string somestring ; Which of the following choices will convert a standard C++ string object "somestring" to a C string?
Answer Choices	
Choice 1:	Copy.somestring () ;
Choice 2:	somestring.c_str ()
Choice 3:	&somestring [1]
Choice 4:	std::cstring (somestring)
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	18

Question:	class basex
	{
	int x;
	public:
	void setx(int y) {x=y;}
	};
	class derived : basex {};
	What is the access level for the member function "setx" in the class "derived" above?

Answer Choices	
Choice 1:	c
Choice 2:	Local
Choice 3:	Public
Choice 4:	Global
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	19

Question:	class Alpha {
	public:
	char data[10000];
	Alpha();
	~Alpha();
	};
	class Beta {
	public:
	Beta() { n = 0; }
	void FillData(Alpha a);
	private:
	int n;
	};
	How do you make the above sample code more efficient?

Answer Choices	
Choice 1:	If possible, make the constructor for Beta private to reduce the overhead of public constructors.
Choice 2:	Change the return type in FillData to int to negate the implicit return conversion from "int" to "void".
Choice 3:	Make the destructor for Alpha virtual.
Choice 4:	Pass a const reference to Alpha in FillData
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	20

Question:	class MyClass {
	int x;
	public:
	MyClass(int I);
	};
	If a class does not have a copy constructor explicitly defined one will be implicitly defined for it. Referring to the sample code above, which one of the following declarations is the implicitly created copy constructor?

Answer Choices	
Choice 1:	MyClass(MyClass *f);
Choice 2:	MyClass(MyClass &f);
Choice 3:	MyClass(const MyClass *f);
Choice 4:	MyClass(const MyClass &f);
Correct Answer:	Choice 4

Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	21

Question:	class HasStatic {
	static int I;
	};
	Referring to the sample code above, what is the appropriate method of defining the member variable "I", and assigning it the value 10, outside of the class declaration?

Answer Choices	
Choice 1:	HasStatic I = 10;
Choice 2:	int static I = 10;
Choice 3:	static I(10);
Choice 4:	int HasStatic::I = 10;
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	22

Question:	class X
	{
	private:
	int a;
	protected:
	X(){cout<<"X constructor was called"<<endl;}
	~X(){cout<<"X destructor was called"<<endl}
	};
	Referring to the code above, which one of the following statements regarding "X" is TRUE?

Answer Choices	
Choice 1:	X is an abstract class.
Choice 2:	Only subclasses of X may create X objects.
Choice 3:	Instances of X cannot be created.
Choice 4:	X objects can only be created using the default copy constructor.

Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	23

Question:	class MyClass {
	const int x;
	protected:
	MyClass(int f);
	~MyClass();
	};
	MyClass f;
	Referring to the sample code above, why will the class declaration not compile?

Answer Choices	
Choice 1:	The variable x is const.
Choice 2:	The destructor is protected.
Choice 3:	The constructor is protected.
Choice 4:	There is no default constructor.
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	24

Question:	class MyClass {
	public:
	MyClass(int i) { }
	};
	class Bar : virtual MyClass {
	public:
	Bar() { }
	};

	Bar b; Referring to the above code, when the object 'b' is defined, a compiler error will occur. What action fixes the compiler error?
Answer Choices	
Choice 1:	Adding a virtual destructor to the class Bar
Choice 2:	Adding a constructor to Bar which takes an int parameter
Choice 3:	Adding "MyClass()" to the Bar constructor
Choice 4:	Adding "MyClass(0)" to the Bar::Bar initializer list
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	25
Question:	Which one of the following describes characteristics of "protected" inheritance?
Answer Choices	
Choice 1:	The base class has access only to the public or protected members of the derived class.
Choice 2:	The derived class has non-public, inheritable, access to all but the private members of the base class.
Choice 3:	The derived class has access to all members of the base class.
Choice 4:	The private members of the base class are visible within the derived class.
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	26
Question:	The "virtual" specifier in a member function enables which one of the following?
Answer Choices	
Choice 1:	Monmorphism
Choice 2:	Late binding
Choice 3:	Metamorphism

Choice 4:	Inheritance
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	27

Question:	class X
	{
	public:
	int x;
	static void f(int z);
	};
	void X::f(int y) {x=y;}
	What is the error in the sample code above?

Answer Choices	
Choice 1:	The class X does not have any protected members.
Choice 2:	The static member function f() accesses the non-static z.
Choice 3:	The static member function f() accesses the non-static x.
Choice 4:	The member function f() must return a value.
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	28

Question:	template<class T, class X> class Obj {
	T my_t;
	X my_x;
	public:
	Obj(T t, X x) : my_t(t), my_x(x) { }
	};
	Referring to the sample code above, which one of the following is a valid conversion operator for the type T?

Answer Choices	
Choice 1:	**T operator T () { return my_t; }**
Choice 2:	**T operator(T) const { return my_t; }**

Choice 3:	**operator(T) { return my_t; }**
Choice 4:	**operator T () const { return my_t; }**
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	29

Question:	catch(exception &e)
	{
	. . .
	}
	Referring to the sample code above, which one of the following lines of code produces a written description of the type of exception that "e" refers to?

Answer Choices	
Choice 1:	cout << e.type();
Choice 2:	cout << e.name();
Choice 3:	cout << typeid(e).name();
Choice 4:	cout << e.what();
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	30

Question:	int f() {
	int I = 12;
	int &r = I;
	r += r / 4;
	int *p = &r;
	*p += r;
	return I;
	}
	Referring to the sample code above, what is the return value of the

	function "f()"?
Answer Choices	
Choice 1:	12
Choice 2:	15
Choice 3:	24
Choice 4:	30
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	31
Question:	The phenomenon where the object outlives the program execution time and exists between executions of a program is known as.
Answer Choices	
Choice 1:	Global Object
Choice 2:	Persistent Object
Choice 3:	Genericity
Choice 4:	Delegation
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	32
Question:	If a class member function is declared a const, the function
Answer Choices	
Choice 1:	Does not change the value of any data member of that class
Choice 2:	Does not change the value of any data member of implied object
Choice 3:	Does not change the value of any data member of that class
Choice 4:	All of the above
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)

Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	33
Question:	The act of grouping into a single object, both data and the operation that affect that data is known as
Answer Choices	
Choice 1:	Encapsulation
Choice 2:	Inheritance
Choice 3:	Abstraction
Choice 4:	None of the above
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	34

Question:	What is the output of the program?
	
	#include <iostream.h>
	
	void main ()
	{
	for(int j = 1, sum = 0; j < 5; j++)
	sum += j;
	sum = j;
	cout << sum;
	}

Answer Choices	
Choice 1:	5
Choice 2:	10
Choice 3:	Compilation error. Undefined variable sum and j
Choice 4:	6

Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	35
Question:	Inheritance is expressed by the following statement?
Answer Choices	
Choice 1:	class car : public vehicle
Choice 2:	class car extends vehicle
Choice 3:	public class car extends vehicle
Choice 4:	class car inherits vehicle
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	36
Question:	Which of the following statements is not correct?
Answer Choices	
Choice 1:	You can create new operators like $ or @
Choice 2:	You cannot change an operator's template
Choice 3:	Operators can only be overloaded when used with abstract data class
Choice 4:	Unary operators overloaded by means of a member functions takes no explicit arguments and return no explicit values
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	37

Question:	Which of the following is false about struct and class in C++?
Answer Choices	
Choice 1:	The members and base classes of a struct are public by default, while in class, they are private by default
Choice 2:	Struct and class are otherwise functionally equivalent
Choice 3:	A class supports all the access specifiers like private, protected and public
Choice 4:	A struct cannot have protected access specifier
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	38
Question:	Abstract base class is one, which has
Answer Choices	
Choice 1:	All pure virtual functions
Choice 2:	At least one pure virtual function
Choice 3:	Functions with abstract keyword
Choice 4:	No pure virtual functions
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	39
Question:	What is exception handling?
Answer Choices	
Choice 1:	Errors which occur at runtime
Choice 2:	When abnormal situation arises at compile time

Choice 3:	When errors occur at link time
Choice 4:	None of the above
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	40
Question:	Which of the following is a correct statement?
Answer Choices	
Choice 1:	Abstract class object can be created
Choice 2:	Pointer to abstract class can be created
Choice 3:	Reference to abstract class can be created
Choice 4:	Both 2 and 3
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	41
Question:	What restrictions apply to reference variables?
Answer Choices	
Choice 1:	You cannot reference a reference variable (i.e. you cannot take its address)
Choice 2:	You cannot create arrays of references
Choice 3:	References are not allowed on bit fields
Choice 4:	All of the above
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++

Q. No.:	42

Question:	What is the output of the program?
	
	#include <iostream.h>
	class test
	{
	int x;
	public:
	test(int y)
	{
	x = y;
	}
	
	int getX()
	{
	int x = 40;
	return this->x;
	}
	};
	
	void main()
	{
	test a(10);
	cout << a.getX();
	}

Answer Choices	
Choice 1:	Compilation error
Choice 2:	10
Choice 3:	40
Choice 4:	None of the above
Correct Answer:	Choice 2
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	43
Question:	What is the prototype of pre increment operator in class test?

Answer Choices	
Choice 1:	void operator ++ ();
Choice 2:	test operator ++ (int);
Choice 3:	void operator ++ (int);
Choice 4:	test operator ++ ();
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	44
Question:	What restrictions apply to extern "C"?
Answer Choices	
Choice 1:	You can specify extern "C" for only one instance of an overloaded function; all other instances of an overloaded function have C++ linkage
Choice 2:	You can only declare C functions as 'extern "C"
Choice 3:	You cannot declare a member function with extern "C"
Choice 4:	Both A and C
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	45

Question:	What is the output of the program?
	
	#include <iostream.h>
	
	void fun(int & a, int b)
	{
	a += 20;
	b += 30;
	}
	
	void main()

	{
	int x = 10, y = 50;
	fun(x, y);
	cout << x << " " << y ;
	}

Answer Choices	
Choice 1:	30 80
Choice 2:	10 50
Choice 3:	30 50
Choice 4:	10 80
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	46

Question:	What is the output of the following?
	
	#include <iostream.h>
	class test
	{
	char x;
	static char c;
	};
	
	void main()
	{
	test a;
	cout << sizeof(a);
	}

Answer Choices	
Choice 1:	1
Choice 2:	2
Choice 3:	4
Choice 4:	None of the above
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/	

website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	47

Question:	What is the member function called in the statement "test b = a" shown below?
	
	void main()
	{
	test a(10);
	test b = a;
	}

Answer Choices	
Choice 1:	Assignment operator
Choice 2:	Constructor
Choice 3:	Copy constructor
Choice 4:	None of the above
Correct Answer:	Choice 3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	48
Question:	The only member functions that could be called for const objects would be?
Answer Choices	
Choice 1:	Constructors
Choice 2:	Destructor
Choice 3:	Const member functions
Choice 4:	All of the above
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	49

Question:	Which keyword do we use if the data members of the class are to be modified even when it belongs to a constant object?
Answer Choices	
Choice 1:	mutable
Choice 2:	static
Choice 3:	const
Choice 4:	friend
Correct Answer:	Choice 1
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	Algorithms and Data Structures using C++
Q. No.:	50
Question:	Which of the following statement is not true about static member functions?
Answer Choices	
Choice 1:	Cannot make use of this pointer
Choice 2:	Cannot access any non-static data
Choice 3:	Cannot be declared const
Choice 4:	None of the above
Correct Answer:	Choice 4
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	

Topic / Module:	C++ and Data structure
Q. No.:	51

Question:	int *ptr = new int;
	*ptr = 10;
	int *ptr1=ptr;
	delete ptr;
	The code shown above results in

Answer Choices	
Choice 1:	memory leak
Choice 2:	**dangling pointer**
Choice 3:	runtime error
Choice 4:	compiler error

Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult(To be marked by review team)
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	C++ and Data structure
Q. No.:	52

Question:	Identify the output of the program
	void main()
	{
	int iLoop =0;
	while (iLoop <= 245);
	{
	cout<<endl<< iLoop * iLoop;
	iLoop ++;
	}
	}

Answer Choices	
Choice 1:	will print squares upto 127 and again from -128 to 127
Choice 2:	Garbage value
Choice 3:	**The loop will never end**
Choice 4:	will print the squares of the numbers from 0 to 245
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult (To be marked by review team)
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	53
Question:	The data encapsulation refers to the feature in which
Answer Choices	
Choice 1:	We hide the unnecessary details from the outside world using classes
Choice 2:	we give access only to the functions and not the data
Choice 3:	**we put the data and functions that operate on the data together in the class**
Choice 4:	There is no such a feature in C++
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	54
Question:	Queue is implemented with linked list, keeping track of a front pointer and a rear pointer. Which of the following will change during an insertion into a nonempty queue.
Answer Choices	
Choice 1:	Neither changes
Choice 2:	Only front pointer changes
Choice 3:	**Only rear pointer changes**
Choice 4:	Both changes
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	55
Question:	The size of the structure in the C++ is equals to
Answer Choices	
Choice 1:	The average of the size of all variables in the structure
Choice 2:	Changes as the data is entered.
Choice 3:	**The sum of memory size of the variables in the structure**
Choice 4:	The size of the largest variable in the structure
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	56

Question:	What is output of the following program
	void main()
	{
	int i;
	for (i=1; i<=32767; i++)
	cout<<endl<<i;
	}

Answer Choices	
Choice 1:	**The endless loop will run**
Choice 2:	will print the values from 1 to 32767
Choice 3:	will give an Error
Choice 4:	will print the values from 1 to 127 only

Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	57
Question:	Constructors are
Answer Choices	
Choice 1:	constructor can have return type
Choice 2:	**The functions with the same name as that of the class**
Choice 3:	The functions that are called by the user
Choice 4:	Used to construct the class
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	58

Question:	class X { public:
	X() { }
	X(const X& rhs): n(rhs.n) { }
	~X() { }
	X& operator=(X& rhs) { this->n = rhs.n; return *this; }
	void setNumber(int a) { this->n = a; }
	private:
	int n; };
	void main() {
	X a;
	X b;
	X c;
	c.setNumber(1);
	a = b = c; } What can be done in the sample code above to allow the statement "a = b = c"?

Answer Choices	
Choice 1:	Add a copy constructor, which will return the value of 'n' (the only member variable)
Choice 2:	Return a dereferenced "this" pointer in the overloaded assignment operator
Choice 3:	The statement is illegal. Nothing can be done to force it in C/C++.
Choice 4:	**This program is perfectly fine.**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult

Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	59
Question:	Destructors are
Answer Choices	
Choice 1:	Normal functions
Choice 2:	**The functions that are called when the object of that class goes out of scope**
Choice 3:	Have the same name as that of class preceded with a ~ and used to destroy that class
Choice 4:	None of these
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	60
Question:	Friend functions has the access to the
Answer Choices	
Choice 1:	**all private, protected and public members**
Choice 2:	Only private members
Choice 3:	Only public members
Choice 4:	only protected and public members
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	61

Question:	What will be the result of the following program :
	void main()
	{
	long power(int , int=2);
	clrscr();
	int num=5 ;
	cout<< power(num);
	getch();

	}
	long power(int n, int p)
	{ long res=1;
	for (int i = 1; i<=p; i++)
	res = res * n;
	return res;
	}

Answer Choices	
Choice 1:	625
Choice 2:	Garbage value
Choice 3:	compile Error
Choice 4:	**25**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	62

Question:	What is output of the following program
	void main()
	{
	int feet = 27;
	clrscr();
	cout<< endl<< feet_to_inches(feet);
	getch();
	}
	inline float feet_to_inches(int feet)
	{
	float res;
	res = feet*12.0;
	return res ;
	}

Answer Choices	
Choice 1:	**Error : function feet_to_inches should have a prototype**
Choice 2:	324
Choice 3:	300
Choice 4:	None of these
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	63
Question:	Which of the following is most correct
Answer Choices	
Choice 1:	Using Template you can create your own template library like STL
Choice 2:	program written using template can be use for any type of data
Choice 3:	In template data type is generated at runtime
Choice 4:	In template if algorithm is same, then it can be used for any type of data (user defined data also)
1	**1 and 2**
2	All 1, 2, 3 and 4
3	1 and 4
4	1, 2 and 3
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	64

Question:	void swap(int &j,int i)
	{int k;
	k=i;i=j;j=k+i;}
	int main(){
	int k = 1;
	int j = 2;
	int i = 3;
	j++;k++; i++;
	swap(k,j);
	cout<<i<<" "<<j<<" "<<k<<endl;
	return 0;}
	what is output?

Answer Choices	
Choice 1:	3 4 5
Choice 2:	**4 3 5**
Choice 3:	3 4 4
Choice 4:	4 5 6
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	65

Question:	Which of the following defines a class with a static data member and correctly initializes it?
Answer Choices	
Choice 1:	class bad {static I;}; int bad:I=99;
Choice 2:	class bad {static int I = 99;};
Choice 3:	**class bad {static int I;};** **int bad::I=99;**
Choice 4:	class bad {static int I=99;}; int I::bad=99;
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	66
Question:	int a[][4] = { {1,2,3}, {1,3,5}, {2,4,6}, {4,8} }; int z = (*(a + 2))[2]; Is the above sample code legal, and if so, what is the value of 'z'? If it is not legal, why not?
Answer Choices	
Choice 1:	No. Only two elements were given (4 and 8), while three were required
Choice 2:	No. The statement "int z = (*(a + 2))[2];" is illegal
Choice 3:	Yes. The value in 'z' will be an address of 'a' plus an offset of 2 times the sizeof 'a' plus 2
Choice 4:	**Yes. The value in z will be 6**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	67
Question:	class X { int j; public: X() { this->j = 0;} X(int n) { this->j = n;} X(const X& rhs) { this->j = rhs.j; } }; int main() { X x1, x2(5); X x3(x2); x1 = x3; } What will happen in the above sample code during compilation and,

	possibly, execution?
Answer Choices	
Choice 1:	**It will compile. Upon execution, the default constructor for 'X' will be called, then the overloaded constructor, and then the copy constructor. The default assignment operator will be used**
Choice 2:	It will fail during compilation because the copy constructor is attempting to use a const reference to modify a member variable.
Choice 3:	It will compile. Upon execution, the default construct for 'X' will be called, then the overloaded constructor, and then a run-time error will occur when the assignment of x1 = x3 is attempte
Choice 4:	It will compile. Upon execution, the default constructor for 'X' will be called once, and then the copy constructor will be called twice, with the last call being used to assign x1 = x3
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	68
Question:	Which of the following stmt. is true about linked list
Answer Choices	
Choice A:	items can be added any where in the queue
Choice B:	items can only be deleted from the front of the queue
Choice C:	Queue is the FIFO structure
Choice D:	Items can be added only from the rear of queue
Choice 1:	2 & 3
Choice 2:	2 & 4
Choice 3:	1 & 4
Choice 4:	**2 &3 & 4**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	69
Question:	DisAdvantage of linked list over array is
Answer Choices	
Choice 1:	Linked list is dynamic,array is static in nature
Choice 2:	**More space is required to store linkedlist than array**

Choice 3:	Linked list contains pointers
Choice 4:	In linked list Insertion and deletion in-between is inefficient
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	70
Question:	The new address field of the last node in the linear linked list contains
Answer Choices	
Choice 1:	Address of first node
Choice 2:	Address of last node
Choice 3:	Garbage value
Choice 4:	**A null value**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	71
Question:	Which of the statements are true about link list
Answer Choices	
Choice A:	Nodes can only be added to the list at the start
Choice B:	Nodes can be inserted in the middle of the list
Choice C:	The nodes can be inserted at the start and end of the linked list
Choice D:	Nodes can only be added at the end of list
Choice 1:	**2 & 3**
Choice 2:	1 & 4
Choice 3:	2 & 4
Choice 4:	1 & 2
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	72
Question:	Which of the following is true
Answer Choices	

Choice 1:	**In protected inheritance, public members become protected of derived class**
Choice 2:	In protected inheritance, private members become protected of base class
Choice 3:	In protected inheritance, protected members remain protected of base class
Choice 4:	In protected inheritance, protected members become public of base clas
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	73
Question:	Binary tree has essentially 3 distinct subset that are
Answer Choices	
Choice 1:	**Root, Left & Right Sub trees**
Choice 2:	First, Second & Third Trees
Choice 3:	Root , Next & Previous Sub trees
Choice 4:	None of Above
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	74
Question:	In a Binary Tree a node having no sub trees are called
Answer Choices	
Choice 1:	Root Nodes
Choice 2:	**Leaf Nodes**
Choice 3:	Left Nodes
Choice 4:	End Node
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	75
Question:	Strictly Binary Trees are

Answer Choices	
Choice 1:	**The Binary Trees in which every non leaf node has non empty left & right sub trees**
Choice 2:	The trees which must have at least one sub tree
Choice 3:	The tree with no leaf node
Choice 4:	None of the above
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	76
Question:	There are 3 methods of traversing a binary tree
Answer Choices	
Choice 1:	Preorder, Straight Order, Post order
Choice 2:	**Preorder, In order, Post order**
Choice 3:	Preorder, Middle order, Post order
Choice 4:	None of the above
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	77
Question:	If a base class member access is public, and an inherited class access specifier is private, which of the following statements is true ?
Answer Choices	
Choice 1:	The base class members can be accessed by clients of the derived class objects
Choice 2:	**The base class members can be accessed by the derived class**.
Choice 3:	The derived class members CANNOT be accessed by the derived class.
Choice 4:	The base class members CANNOT be accessed by the derived class.
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	78

Question:	Which of the following holds valid for the threaded tress
Answer Choices	
Choice 1:	**The thread pointer is different then a tree pointer i.e use to link a node to its left or right**
Choice 2:	The thread is a pointer which points to the left or right node of the binary tree
Choice 3:	The thread is a different node in the binary tree
Choice 4:	None of the above
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	79
Question:	To find record at nth position which of this is best
Answer Choices	
Choice 1:	List implemented using single link list
Choice 2:	List implemented using double link list
Choice 3:	Double or Single Link List are equally best
Choice 4:	**List implemented using an array**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	80
Question:	Classes are useful because they
Answer Choices	
Choice 1:	**encapsulate all the features of an entity in one place**
Choice 2:	can be consider similar to real existing objects
Choice 3:	provide direct access to information
Choice 4:	bring together all aspects of and entity in one place
Choice A:	1 and 2
Choice B:	1, 2 and 3
Choice C:	1, 2 and 4
Choice D	1 to 4
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/	Unknown

website/etc.)	

Topic / Module:	
Q. No.:	81
Question:	int matrix[][2] = { {1}, {2} }; Which of the following choices accurately describes the declaration above?
Answer Choices	
Choice 1:	It is a two dimensional array with element 0,0 = 1, element 0,1 = unknown, element 1,0 = 2, and element 1,1 = unknown
Choice 2:	It is illegal in that the first index was not specified.
Choice 3:	**It is a two dimensional array with element 0,0 = 1, element 0,1 = 0, element 1,0 = 2, and element 1,1 = 0**
Choice 4:	It is a two dimensional array with element 0,0 = 1, element 0,1 = 1, element 1,0 = 2, and element 1,1 = 2
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	82
Question:	Which of the following about operator overloading is correct?
Answer Choices	
Choice 1:	you can create new operator
Choice 2:	operator provided by language has first preference
Choice 3:	**existing operator is given new meaning**
Choice 4:	any operator can be overloaded
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	83

Question:	struct SomeClass
	{
	private:
	int x ;
	public:
	SomeClass (int xx) : x(xx) {} ;
	} ;
	void main() {

	SomeClass x (10) ; SomeClass y(x) ; } What, if anything, is wrong with the initialization of y in the sample code above?
Answer Choices	
Choice 1:	It is illegal because SomeClass has no copy constructor
Choice 2:	It is illegal because SomeClass has no public copy constructor
Choice 3:	It is illegal because SomeClass has no default constructor
Choice 4:	**There is nothing wrong with the initialization of y. It is perfectly legal**
Correct Answer:	4
Difficulty Level:	Intermediate
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	84

Question:	float f = 1 / (177% 5);
	char percent[5];
	switch(f)
	{
	case .25: std::strcpy(percent,"25%"); break;
	case .5: std::strcpy(percent,"50%"); break;
	case .75: std::strcpy(percent,"75%"); break;
	default: std::strcpy(percent,"100%");
	} In the sample code above, what will the value of the char[] "percent" be?

Answer Choices	
Choice 1:	50%
Choice 2:	75%
Choice 3:	**You cannot use a float in a switch statement.**
Choice 4:	100%.
Correct Answer:	3
Difficulty Level:	Easy
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	85
Question:	With regard to C++ friendship, which of the following statements is false?
Answer Choices	
Choice 1:	If class A is a friend of class B, then class A can see all of class B's private data and methods
Choice 2:	**If class A is a friend of class B, and class C inherits from B, then class A is a friend of C.**

Choice 3:	If class A is a friend of class B, you cannot assume that class B is a friend of class A
Choice 4:	You can declare both a friend function and a friend class
Correct Answer:	2
Difficulty Level:	Intermediate
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	86
Question:	class someclass{} ; void main() { someclass x; function () = x ; } Is the assignment statement in the sample code above legal or illegal?
Answer Choices	
Choice 1:	It must be illegal since the left side of the = operator is not an lvalue
Choice 2:	**It is legal if the return type of function is a reference to someclass**
Choice 3:	It is legal if there is an overloaded assignment operator
Choice 4:	It must be illegal since the left side of the = operator is not an rvalue
Correct Answer:	2
Difficulty Level:	Intermediate
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	87
Question:	Why would your class have a pure virtual function?
Answer Choices	
Choice 1:	**To insure that this function is overridden in derived classes that are to be instantiated**
Choice 2:	To allow for templated classes to be used with friend functions
Choice 3:	To maximize the execution speed of the function providing that memory is not at a premium
Choice 4:	To maximize the memory efficiency providing that execution speed is not at a premium
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	88

Question:	class X {
	public:
	X() { pc = new char[10]; }
	~X() { delete [] pc; }
	private:
	char* pc;
	};
	class Y : public X { };
	void main()
	{
	Y* py = new Y();
	delete py;
	}
	What can be said about "X::pc" in the sample code above?

Answer Choices	
Choice 1:	Since "pc" is private, it will not be created when a new class Y is created, so it will neither get created nor destroyed
Choice 2:	It will get created, but it will not get properly destroyed
Choice 3:	**It will both get created and properly destroyed**
Choice 4:	It will not get created, but when "py" goes out of scope, an error will occur when it attempts to destroy it
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	89
Question:	Which of the following must be an example of Polymorphism?
Answer Choices	
Choice 1:	A class that has several derived classes
Choice 2:	A pointer to a derived class invoking a member function defined in the base class
Choice 3:	A pointer to a class invoking the member function of a sibling class
Choice 4:	**None of the above examples are necessarily an example of polymorphism**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	

Q. No.:	90
Question:	In traversing a binary tree the post order method refers to
Answer Choices	
Choice 1:	**Traverse the left sub tree in post order** **Traverse the right sub tree in post order** **Visit the root**
Choice 2:	Visit the root Traverse the left sub tree in post order Traverse the right sub tree in post order
Choice 3:	Traverse the left sub tree in post order Visit the root Traverse the right sub tree in post order
Choice 4:	Visit the root Traverse the right sub tree in post order Traverse the left sub tree in post order
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	91
Question:	Which kind of functions can access private member variables of a class?
Answer Choices	
Choice 1:	Friend functions of the class
Choice 2:	Private member functions of the class
Choice 3:	Public member functions of the class
Choice 4:	**All of the above can access private member variables**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	92

Question:	Here is a function prototype and some possible function calls: int day_of_week(int year, int month = 1, int day = 1);
	
	// Possible function calls:
	
	cout << day_of_week( );
	cout << day_of_week(1995);
	cout << day_of_week(1995, 10);

	cout << day_of_week(1995, 10, 4); How many of the function calls are legal?
Answer Choices	
Choice 1:	1 of them is legal
Choice 2:	1 of them is legal
Choice 3:	**3 of them are legal**
Choice 4:	All of them are legal
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	93

Question:	Here is a small function definition:
	`void f(int i, int &k)`
	`{`
	`i = 1;`
	`k = 2;`
	`}`
	Suppose that a main program has two integer variables x and y, which are given the value 0. Then the main program calls f(x,y); What are the values of x and y after the function f finishes?

Answer Choices	
Choice 1:	Both x and y are still 0
Choice 2:	x is now 1, but y is still 0
Choice 3:	**x is still 0, but y is now 2**
Choice 4:	x is now 1, and y is now 2
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	94
Question:	The following numbers are inserted into an empty binary search tree in the given order: 10, 1, 3, 5, 15, 12, 16. What is the height of the binary search tree (the height is the maximum distance of a leaf node from the root)?
Answer Choices	
Choice 1:	2

Choice 2:	3
Choice 3:	4
Choice 4:	6
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	95

Question:	Estimate the output :
	class Base
	{
	int cNo; char cName[20];
	public :
	void show()
	{ cout<<endl<<"Base Class"; }
	};
	class Derived : public Base
	{
	float dNo;
	public:
	void show()
	{ cout<<endl<<"Derived class";}
	};
	void main(){
	Base b1;
	Derived d1;
	b1.show();
	d1.show();
	Base& b2 = d1;
	b2.show();
	d1 = b1;
	d1.show();
	}

Answer Choices	
Choice 1:	**Error : Can not convert Base to Derived**
Choice 2:	Base Class Derived Class Base Class Derived Class
Choice 3:	Base Class Derived Class Derived Class Base Class
Choice 4:	Base Class Derived Class Derived Class Derived Class
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	96

Question:	class A
	
	{
	public:
	int i=0;
	int j;//=20;
	
	};
	void main()
	{
	A obj;
	cout<< obj.i;
	cout<< obj.j;
	}

Answer Choices	
Choice 1:	10 20
Choice 2:	20 10
Choice 3:	**Error**
Choice 4:	Garbage value
Correct Answer:	3
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	97

Question:	What will be the output of the following program :
	union Book
	{
	char name[10];
	float price;
	int pages;
	};
	void main()
	{
	Book b1;
	cout<<endl<<sizeof(b1);
	}

Answer Choices	
Choice 1:	**10**
Choice 2:	4
Choice 3:	2
Choice 4:	16
Correct Answer:	1
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	98

Question:	class A
	{
	int i;
	float p;
	char c;
	public :
	A(int in, float f, char ch)
	{
	i = in;
	p = f;
	c = ch;
	}
	void show();
	};
	void A::show()
	{
	cout<<endl<<"i = "<<i << ", p = "<<p<< ", c = " <<c;
	}
	void main()
	{
	A obj1(355,78.90,'D');
	A obj2;
	obj1.show();
	obj2 = obj1;
	obj2.show();
	}

Answer Choices	
Choice 1:	will print the values of the variables in both the objects
Choice 2:	will print the values of the obj1 and garbage value for obj2
Choice 3:	will print garbage values for both the objects
Choice 4:	**Compiler Error**
Correct Answer:	4
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	99

Question:	void afunction(int *x)
	{
	x=new int;
	*x=12;
	}
	int main()
	{
	int v=10;
	afunction(&v);
	cout<<v;
	}

Answer Choices	
Choice 1:	Outputs 12
Choice 2:	**Outputs 10**
Choice 3:	Outputs the address of v
Choice 4:	Compilation error

Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Topic / Module:	
Q. No.:	100
Question:	Which uses less memory?
Answer Choices	

Choice 1:	struct astruct
	{
	int x;
	float y;
	int v;
	};

Choice 2:	**union aunion** **{** **int x;** **float v;** **};**
Choice 3:	char array[10];
Choice 4:	
Correct Answer:	2
Difficulty Level:	Easy / Intermediate / Difficult
Reference: (If question taken from book/ website/etc.)	Unknown

Q. No. 101

Question:

Which statement is most appropriate for C++ language??

Answer Choices:

A. Type less language
B. Statically typed language
C. Dynamically typed language
D. Both B and C

Difficulty Level: Easy

Correct Answer: B

Q. No. 102

Question:

Which of the following is a correct statement?

Answer Choices

A. A reference is declared using * operator
B. Once a reference variable has been defined to refer to a particular variable it can refer to any other variable
C. A variable can have multiple references
D. A reference must always be initialized within classes

Difficulty Level: Intermediate

Correct Answer: C

Q. No. 103

Question:

main() is an example of ……..

Answer Choice:

A. user defined function
B. system-supplied function
C. inline function
D. none of the above

Difficulty Level: Easy

Correct Answer: A

Q. No. 104

Question:

1. What will be the output of below cout (assume 64 bit system)?
   cout<<25u-50;

Answer Choices

A. -25
B. 25
C. 4294967271
D. None of the above

Difficulty Level: Difficult

Correct Answer: C

Q. No. 105

Question:

What will be the output of the following program below?

#include<iostream>

```
using namespace std;
class Surprise{
        void virtual Confuse(void)=0;
};
int main(){
        cout<<sizeof(Surprise)<<endl;
        return 0;
}
```

Answer Choices

A. The program will report compilation error(S)
B. The program will print 4 in 32bit compiler and 8 in 64bit compiler under Windows
C. The program will print 0
D. The program will print 1

Difficulty Level: Easy

Correct Answer: B

Q. No. 106

Question:

How many times will the for loop get executed:

```
unsigned char half_limit = 150;
for (unsigned char i = 0; i < 2 * half_limit; ++i)
{    // do something;    }
```

Answer Choice:

A. 300
B. 150
C. 301
D. Infinite loop

Difficulty Level: Difficult

Correct Answer: D

Q. No. 107

Question:

What is the output of the following?

```
#include<iostream>
class Test{
  static void fun(int i){}
```

```
  void fun(int i){}
};
int main(){
  Test t;
  getchar();
return 0;
}
```

Answer Choices

A. 0
B. No output program will execute successfully.
C. Compilation error
D. Runtime error

Difficulty Level: Intermediate

Correct Answer: C

Q. No. 108

Question:

The symbol ** …….

Answer Choices

A. Can be overloaded by changing its data type.
B. Can't be overloaded, as on overloading its meaning shall be changed.
C. Can be overloaded
D. Can't be overloaded as it is not a C++ operator.

Difficulty Level: Easy

Correct Answer: D

Q. No. 109

Question:

Which of the following is false?

Answer Choices

A. Inheritance is deriving new class from existing class
B. In an inheritance, all data and function members of base class are derived by derived class
C. We can specify which data and function members of base class will be inherited by derived class
D. We can add new functions to derived class without recompiling the base class

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 110

Question:

Which of the following statements is correct?

Answer Choices

A. Inline member functions are also inherited to the derived class

B. Inline member functions are not inherited to the derived class

C. The inheritance of the inline member functions depends upon their scope

D. Inline member functions are by default inherited to the derived class

Difficulty Level: Easy

Correct Answer: C

Q. No. 111

Question:

A class is called an abstract class when a class has a …….?

Answer Choices

A. virtual function
B. friend function
C. static function
D. pure virtual function

Difficulty Level: Easy

Correct Answer: D

Q. No. 112

Question:

Which one of the following options is correct about the statement given below?

The compiler checks the type of reference in the object and not the type of object.

Answer Choices

A. Inheritance

B. Polymorphism

C. Abstraction

D. Encapsulation

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 113

Question:

If Class A is friend of class B and if class B is friend of class C then, which of the following is true?

Answer Choices

A. Class C is friend of Class A
B. Class A is friend of class C
C. Class A and Class C do not have any friend relationship
D. None of the above.

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 114

Question:

What will happen in this code?

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

Answer Choices

A. b is assigned to a
B. p now points to b
C. a is assigned to b
D. q now points to a

Difficulty Level: Intermediate

Correct Answer: B

Q No 115

Question:

```
enum state  {working, failed};
enum result {failed, passed};

int main()  { cout<<"\n Hello world…";
return 0; }
```

Answer Choices:

A. No output
B. Compilation Error

C. Runtime Error

D. Prints Hello World… on new line

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 116

Question:

The return value of the following code is:

```
Class1& test(Class1 obj)
Class1 *ptr = new Class1();
.....
return {
ptr;
}
```

Answer Choice:

A. object of Class1
B. reference to ptr
C. reference of Class1
D. object pointed by ptr

Difficulty Level: Intermediate
Correct Answer: B

Q. No. 117

Question:

What is the output of following code?

```
class A {
public:    A() {}
   ~A() {       throw 42;    }
};
int main() {
   try {
      A a;
    throw 32;
      } catch(int b) {
        cout << b;
   }
   return 0;
}
```

Answer Choices

A. Abnormal program termination
B. 32
C. 42
D. Compile time error

Difficulty Level: Intermediate

Correct Answer: A

Q. No. 118

Question:

A direct access file is

Answer Choices

A. A file in which records are arranged in a way they are inserted in a file
B. A file in which records are arranged in a particular order
C. Files which are stored on direct access storage medium
D. None of the above

Difficulty Level: Easy

Correct Answer: C

Q. No. 119

Question:

An application iterates the hashtable by calling the …….. and …….. member functions.

Answer Choices

A. hasNext() and hasDelete()
B. hasNext() and getNextKey()
C. Both A and B
D. None of these

Difficulty Level:Easy

Correct Answer: B

Q. No. 120

Question:

How many copies of the functions will be generated by the compiler from one copy of function template, if the function is called using three different types of arguments?

Answer Choices

A. 3
B. 1
C. 4
D. 2

Difficulty Level: Intermediate

Correct Answer: A

Q. No. 121

Question:

The sequence of operations- push(1), push(2), pop, push(1), push(2), pop, pop, pop, push(2), pop are performed on a stack, the sequence of popped out values are?

Answer Choices

A. 2, 2, 1, 1, 2
B. 2, 2, 1, 2, 2
C. 2, 1, 2, 2, 1
D. 2, 1, 2, 2, 2

Difficulty Level: Easy

Correct Answer: A

Q. No. 122

Question:

In circular queue, what will be the value of rear?

Answer Choices

A. rear= rear+1;
B. rear=(rear+1)%[Queue_Size-1]
C. rear=(rear+1)%Queue_Size
D. rear=(rear-1) %Queue_Size

Difficulty Level: Easy

Correct Answer: C

Q. No. 123

Question:

In circular linked list, insertion of node requires modification of?

Answer Choices

A. One pointer
B. Two pointer
C. Three pointer

D. None.

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 124

Question:

Consider an implementation of unsorted circular linked list. Suppose it has its representation with a head pointer only. Given the representation, which of the following operation can be implemented in O(1) time?

i) Insertion at the front of the linked list

ii) Insertion at the end of the linked list

iii) Deletion of the front node of the linked list

iv) Deletion of the end node of the linked list

Answer Choices

A. I and II

B. I and III

C. I, II, III and IV

D. None

Difficulty Level: Difficult

Correct Answer: B

Q. No. 125

Question:

When inorder traversing a tree resulted E A C K F H D B G; the preorder traversal would return

Answer Choices

A. FAEKCDBHG

B. FAEKCDHGB

C. EAFKHDCBG

D. FEAKDCHBG

Difficulty Level: Easy

Correct Answer: B

Q. No. 126

Question:

A binary tree stored using linked representation can be converted to its mirror image by traversing it in

Answer Choices

A. Inorder
B. Preorder
C. Postorder
D. Any Order

Difficulty Level: Intermediate

Correct Answer: B

Q. No. 127

Question:

Suppose we have numbers between 1 and 1000 in a binary search tree and want to search for the number 363. Which of the following sequence could not be the sequence of the node examined?

Answer Choices

A. 2, 252, 401, 398, 330, 344, 397, 363
B. 924, 220, 911, 244, 898, 258, 362, 363
C. 925, 202, 911, 240, 912, 245, 258, 363
D. 2, 399, 387, 219, 266, 382, 381, 278, 363

Difficulty Level: Intermediate

Correct Answer: C

Q. No. 128

Question:

A threaded binary tree is a binary tree in which every node that does not have right child has a thread to its

Answer Choices

A. Pre-order successor
B. In-order successor
C. In-order predecessor
D. Post-order successor

Difficulty Level: Easy

Correct Answer: B

Q. No. 129

Question:

A Graph 'G' with n nodes is bipartite if it contains

Answer Choices

A. N edges
B. A cycle of odd length
C. No cycle of odd length
D. N^2 edges

Difficulty Level: Intermediate

Correct Answer: C

Q. No. 130

Question:

The number of edges in a simple, n-vertex, complete graph is-

Answer Choices

A. N*(N-2)
B. N*(N-1)
C. N*(N-1)/2
D. N*(N-1)*(N-2)

Difficulty Level: Easy

Correct Answer: C

Q. No. 131

Question:

The spanning tree of connected graph with 10 vertices contains

Answer Choices

A. 9 edges
B. 11edges
C. 9 vertices
D. 10 edges

Difficulty Level: Easy

Correct Answer: A

Q. No. 132

Question:

Hashing collision resolution techniques are-

Answer Choices

A. Huffman Coding, linear Hashing
B. Bucket Addressing, Huffman Coding
C. Chaining, Huffman Coding
D. Chaining, Bucket Addressing

Difficulty Level: Easy

Correct Answer: D

Q. No. 133

Question:

The way a card game player arranges his cards as he pick them up one by one, is an example of?

Answer Choices

A. Bubble sort
B. Selection sort
C. Insertion sort
D. Merge sort

Difficulty Level: Easy

Correct Answer: C

Q. No. 134

Question:

The search technique for searching a sorted file that requires increased amount of space is

Answer Choices

A. Indexed Sequential Search
B. Interpolation Search
C. Tree search
D. Binary Search

Difficulty Level: Intermediate

Correct Answer: A

Q. No. 135

Question:

If n numbers are to be sorted in ascending order in O(nlogn) time, which of the following tree can be used

Answer Choices

A. Binary tree
B. Binary search tree
C. Max-heap
D. Min-heap

Difficulty Level: Easy

Correct Answer: D

Q. No. 136

Question:

Prim's Algorithm is a method available for finding out the minimum cost of a spanning tree . Its time complexity is given by:

Answer Choices

A. O(n*n)
B. O(n log n)
C. O(n)
D. O(1)

Difficulty Level: Easy

Correct Answer: A

Q. No. 137

Question:

Given two sorted lists of size m and n respectively. The number of comparisons needed in the worst case by the merge sort algorithm will be?

Answer Choices

A. Mn
B. Max(m,n)

C. Min(m,n)
D. M+n-1

Difficulty Level: Intermediate

Correct Answer: A

Q. No. 138

Question:

Which of the following sorting algorithm is of priority queue sorting type?

Answer Choices

A. Bubble sort
B. Insertion Sort
C. Merge Sort
D. Selection Sort

Difficulty Level: Easy

Correct Answer: D

Q. No. 139

Question:

Which of the following algorithm design technique is used in the quick sort algorithm?

Answer Choices

A. Dynamic Programming
B. Backtracking
C. Divide and Conquer
D. Greedy Method

Difficulty Level: Easy

Correct Answer: C

Q. No. 140

Question:

What algorithm technique is used to implement Kruskal's solution for minimum spanning tree?

Answer Choices

A. Greedy Algorithm
B. Divide and Conquer technique
C. Dynamic Programming

D. The algorithm combines more than one of the above techniques.

Difficulty Level: Easy

Correct Answer: A

Q. No. 141

Question:

Which of the following is a limit on inline functions?

Answer Choices

A: Inline functions cannot return a value.

B: Inline functions must return a value.

C: Inline functions must be less than ten lines.

D: **The compiler may choose to ignore an inline directive.**

Difficulty Level: Intermediate

Q. No. 142

Question:

Identify the correct sentence regarding inequality between reference and pointer.

Answer Choices

A: **We cannot create the array of reference.**

B: We can create the Array of reference.

C: We can use reference to reference.

D: None of the above.

Difficulty Level: Easy

Q. No. 143

Question:

Which keyword is used to access the variable in namespace?

Answer Choices

A: **using** B: dynamic C: Const D: static

Difficulty Level: Easy

Q. No. 144

Question:

What does an empty class contain?

Answer Choices

A: Default constructor

B: Copy constructor

C: Address of operator

D: **All of the above**

Difficulty Level: Easy

Q. No. 145

Question:

Which of the following is not a overloaded function

```
int sum(int x, int y) { }
```

Answer Choices

A: int sum(int x, int y, int z) { }

B: **float sum(int x, int y) { }**

C: int sum(float x, float y) { }

D: float sum(int x, int y, float z) { }

Difficulty Level: Intermediate

Q. No. 146

Question:

Which of the following are false about Constructors?

Answer Choices

A: A class inherits its constructors from its parent

B: A compiler supplies a default constructor if no constructors are provided for a class

C: All constructors have a void return type

D: A constructor may throw an exception

Difficulty Level: Intermediate

Q. No. 147

Question:

The following example shows that class C derived from classes A & B. Which of them is illegal?

Answer Choices

A: Class C : public A, public B

B: **Class C : public A : public B**

C: Class C : public A, B

D: Class C : private A, public B

Difficulty Level: Easy

Q. No. 148

Question:

What is the output of the following

```
class Base
{
      int cNo;  char cName[20];
      public :
        void show()
        {    cout<<endl<<"Base Class";  }
};
class Derived : public Base
{
      float dNo;
      public:
        void show()
        {  cout<<endl<<"Derived class";}
};
void main(){
      Base b1;
      Derived d1;
      b1.show();
      d1.show();
      Base& b2 = d1;
      b2.show();
      d1.show();
}
```

Answer Choices

A: Error : Cannot convert Base to Derived

B: **Base Class**

Derived Class

Base Class

Derived Class

C: Base Class

Derived Class

Derived Class

Base Class

D: Base Class

Derived Class

Derived Class

Derived Class

Difficulty Level: Difficult

Q. No. 149

Question:

Pick out the correct statement.

Answer Choices

A: A derived class's constructor cannot explicitly invokes its base class's constructor.

B: **A derived class's destructor cannot invoke its base class's destructor.**

C: A derived class's destructor can invoke its base class's destructor.

D: None of the above.

Difficulty Level: Difficult

Q. No. 150

Question:

What will be the output of following program:

```
#include<iostream.h>
class base
{
public:
    virtual void fun()
    {
        cout<<"In Base::fun()";
    }
    void fun1()
```

```
    {
        fun();
    }
};
class derived:public base
{
public:
    void fun()
    {
        cout<<"In derived::fun()";
    }
};

int main()
{
    derived *d=new base;
    d.fun1();
    return 0;
}
```

Answer Choices

A: Error: a value of type base cannot be used to initialized value of type derived.

B: In derived::fun()

C: In base::fun()

D: Error: Cannot call the method of the base class.

Difficulty Level: Difficult

Q. No. 151

Question:

What will be the output of following code:

```
1.  int testarray[3][2][2] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12};

2.  int main(){
3.  cout<<testarray[2][0][0] <<"  ";
4.  cout<<*(*(*(testarray+2)+0)+0);
5.  getch();
6.  return 0;
7.  }
```

Answer Choices

A: Error illegal operation at line no. 4

B: 9 and address

C: **9 9**

D: depends on compiler.

Difficulty Level: Difficult

Q. No. 152

Question:

What does the following do:

```
void afunction(int *x)
{
x=new int;
*x=12;
}
int main()
{
int v=10;
afunction(&v);
cout<<v;
}
```

Answer Choices

A: outputs 12 B: **outputs 10** C: Address of v D: None

Difficulty Level: Difficult

Q. No. 153

Question:

```
#include<iostream>
#include <fstream>
using namespace std;
int main ()
{
    ofstream outfile ("test.txt");
    for (int n = 0; n < 100; n++)
    {
        outfile << n;
        outfile.flush();
    }
    cout << "Done";
    outfile.close();
          getch();
    return 0;
}
```

Answer Choices

A: Error: flush is not defined.

B: **Program will print "Done" on screen.**

C: No Error, but file will not get created.

D: Text file cannot contain only numbers.

Difficulty Level: Intermediate

Q. No. 154

Question:

What seekg() function of istream does

Answer Choices

A: **It sets the position of the next character to be extracted from the input stream.**

B: It returns the next character in the input sequence, without extracting it.

C: It returns the position of the current character in the input stream.

D: seekg() is not a function of istream.

Difficulty Level: Intermediate

Q. No. 155

Question:

Which keyword can be used in template?

Answer Choices

A: class B: typename C: **Both A and B** D: function

Difficulty Level: Easy

Q. No. 156

Question:

What will be the output of following code?

```
#include <iostream>
using namespace std;
template <class T>
T max (T& a, T& b)
{
    return (a>b?a:b);
}
int main ()
{
    int i = 5, j = 6, k;
    long l = 10, m = 5, n;
    char ch1='A', ch2='Z',cha;
          k = max(i, j);
          n = max(l, m);
          cha=max(ch1,ch2);
    cout << k <<"  ";
    cout << n <<"  ";
    cout<< cha <<"  ";
}
```

Answer Choices

A: **6 10 Z** B: 5 5 A C: Syntax Error D: 6 10 error

Difficulty Level: Difficult

Q. No. 157

Question:

A ..... is a linear list in which insertions and deletions are made to from either end of the structure.

Answer Choices

A: circular queue B: random of queue

C: priority D: **dequeue**

Difficulty Level: Easy

Q. No. 158

Question:

Which of the following operations is performed more efficiently by doubly linked list than by singly linked list?

Answer Choices

A: **Deleting a node whose location in given**

B: Searching of an unsorted list for a given item

C: Inverting a node after the node with given location

D: Traversing a list to process each node

Difficulty Level: Intermediate

Q. No. 159

Question:

Linked lists are not suitable for the implementation of?

Answer Choices

A: Insertion sort B: Radix sort

C: Polynomial manipulation D: **Binary search**

Difficulty Level: Difficult

Q. No. 160

Question:

In circular linked list, insertion of node requires modification of?

Answer Choices

A: One pointer B: **Two pointers**

C: Three pointers D: None

Difficulty Level: Easy

Q. No. 161

Question:

In worst case, the number of comparison need to search a singly linked list of length n for a given element is

Answer Choices

A: log n B: n/2 C: log2n – 1 **D: n**

Difficulty Level: Intermediate

Q. No. 162

Question:

Consider linked list is used to implement the Stack then which of the following node is considered as Top of the Stack?

Answer Choices

A: **First Node** B: Middle Node C: Last Node D: Any Node

Difficulty Level: Easy

Q. No. 163

Question:

The depth of complete binary tree is given by .....

Answer Choices

A: Dn = n log2n
B: Dn= n log2n+1
C: Dn = log2n
D: Dn = log2n+1

Difficulty Level: Difficult

Q. No. 164

Question:

Sequential representation of binary tree uses .

Answer Choices

A: **Array with pointers**
B: Single linear array
C: Two dimentional arrays
D: Three dimentional arrays

Difficulty Level: Intermediate

Q. No. 165

Question:

Which indicates pre-order traversal?

Answer Choices

A: Left sub-tree, Right sub-tree and root
B: Right sub-tree, Left sub-tree and root
C: **Root, Left sub-tree, Right sub-tree**
D: Right sub-tree, root, Left sub-tree

Difficulty Level: Easy

Q. No. 166

Question:

In a binary tree, certain null entries are replaced by special pointers which point to nodes higher in the tree for efficiency. These special pointers are called .....

Answer Choices

A: Leaf
B: Branch
C: Thread
D: Path

Difficulty Level: Intermediate

Q. No. 167

Question:

If every node u in G is adjacent to every other node v in G,A graph is said to be …..

Answer Choices

A: isolated

B: complete

C: finite

D: strongly connected

Difficulty Level: Difficult

Q. No. 168

Question:

A connected graph T without any cycles is called .

Answer Choices

A: a tree graph

B: free tree

C: a tree

D: **All of the above**

Difficulty Level: Intermediate

Q. No. 169

Question:

The function used to modify the way of sorting the keys of records is called ...

Answer Choices

A: Indexing function

B: Hash function

C: Addressing function

D: All of the above

Difficulty Level: Intermediate

Q. No. 170

Question:

A graph is said to be ..... if its edges are assigned data.

Answer Choices

A: Tagged B: Marked C**: Labeled** D: Stricked

Difficulty Level: Easy

Q. No. 171

Question:

Which of the following sorting algorithm is of divide and conquer type?

Answer Choices

A: Bubble sort B: Insertion sort

C: **Quick sort** D: Merge sort

Difficulty Level: Easy

Q. No. 172

Question:

The complexity of selection sort is _____

Answer Choices

A: O(n) B: **O(n2)** C: O(n logn) D: O(logn)

Difficulty Level: Intermediate

Q. No. 173

Question:

Quick sort is also known as ....

Answer Choices

A: merge sort B: tree sort

C: shell sort D: **partition and exchange sort**

Difficulty Level: Intermediate

Q. No. 174

Question:

To apply the binary search algorithm, the data items should be represented as:

Answer Choices

A: a binary tree

B: a list implemented as a linked-list

C: a list implemented as an array

D: an ordered list implemented as an array

Difficulty Level: Intermediate

Q. No. 175

Question:

The algorithm which does require fixed amount of storage is

Answer Choices

A: **Heap Sort**

B: Quick sort

C: Both of above

D: None of the above

Difficulty Level: Intermediate

Q. No. 176

Question:

A sorting method is said to be stable if

Answer Choices

A: It takes O(n log n) time.

B: It uses divide and conquer strategy.

C: **It maintains the relative order of non-distinct elements.**

D: It takes less than O(n^2) time.

Difficulty Level: Difficult

Q. No. 177

Question:

Efficient algorithm requires less computational……

Answer Choices

A: Memory

B: Running Time

C: **Memory and Running Time**

D: Energy

Difficulty Level: Difficult

Q. No. 178

Question:

The brute-force algorithm for solving the Traveling Salesman Problem is

Answer Choices

A: an approximate and efficient algorithm.

B: an approximate and inefficient algorithm.

C: **an optimal and inefficient algorithm.**

D: an optimal and efficient algorithm.

Difficulty Level: Difficult

Q. No. 179

Question:

What will be the total number of max comparisons if we run brute-force maxima algorithm with n elements?

Answer Choices

A: **n^2** B: 2n/n C: n D: 8n

Difficulty Level: Intermediate

Q. No. 180

Question:

Which of the following algorithm design technique is used in the quick sort algorithm?

Answer Choices

A: Dynamic Programming B: Backtracking

C: **Divide and conquer** D: Greedy Method

Difficulty Level: Easy

Q. No. 181

Question:

Identify the correct statement.

Answer Choices

A: **Namespace is used to group class, objects and functions**.
B: Namespace is used to mark the beginning of the program.
C: Namespace is used to seperate the class, objects.
D: None of the above

Q. No. 182

Question:

What happens when a class with parameterized constructors and having no default constructor is used in a program and we create an object that needs a zero-argument constructor?

Answer Choices

A: Compile-time error. B: Preprocessing error

C: Runtime error D: Runtime exception

Q. No. 183

Question:

What is the output of the following code?

```
#include<iostream.h>
void main()
{
int a = 20,b=100;
int &n = a;
n=a++;
n = &b;
cout<<a <<" ,"<<n<<endl;
}
```

Answer Choices

A: 21, 21 B: **Error** C: 21, 22 D: 20,21

Q. No. 184

Question:

Copy constructor must receive its arguments by?

Answer Choices

A: either pass-by-value or pass-by-reference
B: only pass-by-value
C: only pass-by-reference
D: only pass by address

Q. No. 185

Question:

Answer Choices

A suitable place to store Class declarations is _____.

A: None of these
B: Their own header files
C: Auxiliary .cpp file

D: main .cpp files, along with function definitions

Q. No. 186

Question:

Answer Choices

Override is a method…?

A: For an operation that replaces an inherited method for the same operation
B: For a data that replaces an inherited method for the same operation
C: For an operation that takes argument from library function
D: None of these

Q. No. 187

Question:

The ability to reuse objects already defined, perhaps for a different purpose, with modification appropriate to the new purpose, is referred to as

Answer Choices

A: Overloading. B: Redefinition. **C: Inheritance**. D: Information hiding.

Q. No. 188

Question:

If a class C is derived from class B, which is derived from class A, all through public inheritance, then a class C member function can access

Answer Choices

A: Protected and public data only in C and B.
B: Protected and public data only in C.
C: Private data in A and B.
D: Protected data in A and B

Q. No. 189

Question:

What do you think is the outcome of calling a redefined non-virtual function using a base-class pointer?

Answer Choices

A: The appropriate redefined version of the function will be used.
B: A run-time error will occur .
C: The base-class version of the function will always be used.
D: The outcome is unpredictable.

Q. No. 190

Question:

Pure virtual functions

Answer Choices

A: have to be redefined in the inherited class.
B: cannot have public access specification.
C: Are mandatory for virtual class.
D: None of the above.

Q. No. 191

Question:

Function templates can accept

Answer Choices

A: any type of parameters.
B: Only one parameter.
C: Only parameters of the basic type
D: Only parameters of the derived type

Q. No. 192

Question:

Which of the following statement is valid?

Answer Choices

A: We can create new C++ operators.
B: We can change the precedence of the C++ operators.
C: We can change the associativity of the C++ operators.
D: We can not change operator templates.

Q. No. 193

Question:

To which type of class, We can apply RTTI?

Answer Choices

A: Encapsulation . B: **Polymorphic.**
C: Derived. D: None of the above.

Q. No. 194

Question:

Which of the STL containers store the elements contiguously(in adjacent memory locations)?

Answer Choices

A: Std :: vector B: **Std :: list** C: Std ::map D: Std :: set

Q. No. 195

Question:

If the sequence of operations – push(1),push(2),pop,push(1),push(2),pop,pop,pop,push(2),pop are performed on a stack, the sequence of popped out values are?

Answer Choices

A: **2 , 2, 1, 1, 2**. B: 2 , 2, 1, 2, 2
C: 2, 1, 2, 2, 1 D: 2, 1, 2, 2, 2

Q. No. 196

Question:

Queue can be used to implement ?

Answer Choices

A: Recursion B: Quick sort C: **Radix sort** D: Depth first search

Q. No. 197

Question:

Consider a class List that implements an unordered list. Suppose it has as its representation a singly linked list with a head and tail pointer (i.e., pointers to the first and last nodes in the list). Given that representation, which of the following operations could be implemented in O(1) time?

I) Insert item at the front of the list
II) Insert item at the rear of the list
III) Delete front item from list
IV) Delete rear item from list

Answer Choices

A: I and II B: I and III

C: I, II and IV D: **I ,II and III**

Q. No. 198

Question:

Linked lists are not used in

Answer Choices

A: OS B: Linker C: Compiler D: **None**

Q. No. 199

Question:

The number of binary trees with 3 nodes which when traversed in post order gives the sequence A, B, C is?

Answer Choices

A: 3 B: **5** C: 7 D: 9

Q. No. 200

Question:

A binary tree that has n leaf nodes. The number of nodes of degree 2 in this tree is ?

Answer Choices

A: **n-1** B: $\log_2 n$ C: n D: 2^n

Q. No. 201

Question:

In a binary tree , certain null entries are replaced by special pointers which point to nodes higher in the tree for efficiency. These special pointers are called

Answer Choices

A: Leaf B: Branch C: Path D: **Thread**

Q. No. 202

Question:

In a binary tree whose every node has either zero or two children is called

Answer Choices

A: Complete binary tree
B: Binary search tree

C: Extended binary tree
D: None of the above

Q. No. 203

Question:

Searching Techniques in Ghraph are

Answer Choices

A: Breadth-last Search & Depth- first Search
B: Breadth-first Search & Depth- first Search
C: Depth- last Search & Breadth-first Search
D: Breadth-last Search & Depth- last Search

Q. No. 204

Question:

In a graph if e=[u, v] ,Then u and v are called

Answer Choices

A: Endpoints of e
B: Adjacent nodes
C: Neighbors
D: **All of above**

Q. No. 205

Question:

Assuming that the hash function for a table works well, and the size of the hash table is reasonably large compared to the number of items in the table, the expected (average) time needed to find an item in a hash table containing n items is

Answer Choices

A: **O(1)** B: O(log n) C: O(n log n) D: O(√n)

Q. No. 206

Question:

The average search time of hashing with linear probing will be less if the load factor?

Answer Choices

A: Is far less than one

B: Equals one
C: Is far greater than one
D: None of the above

Q. No. 207

Question:

One of the following algorithms is NOT an example of using the divide-and-conquer technique

Answer Choices

A: Quick sort B: **Bubble Sort** C: Merge sort D: Binary Search

Q. No. 208

Question:

A machine took 200 sec to sort 200 names,using bubble sort. In 800 sec,it can approximately sort?

Answer Choices

A: **400 names** B: 800 names C: 750 names D: 800 names

Q. No. 209

Question:

Suppose we need to sort a list of employee records in ascending order, using the social security number (a 9-digit number) as the key (i.e., sort the records by social security number). If we need to guarantee that the running time will be no worse than n log n, which sorting methods could we use?

Answer Choices

A: Quick sort B: Insertion
C: **Merge sort** D: Either merge sort or quick sort

Q. No. 210

Question:

What is the time complexity of merge sort in best case?

Answer Choices

A: O(n^2) B: O(n) C: O(n+2^k) D: **O(n.log n)**

Q. No. 211

Question:

Which of the following is not the required condition for binary search algorithm?

Answer Choices

A: The list must be sorted
B: there should be the direct access to the middle element in any sub list
C: There must be mechanism to delete and/or insert elements in list
D: none of above

Q. No. 212

Question:

Binary search algorithm cannot be applied to

Answer Choices

A: **sorted linked list** B: sorted binary trees
C: sorted linear array D: pointer array

Q. No. 213

Question:

The benefits of object-oriented modeling are which of the following?

Answer Choices

A: The ability to tackle more challenging problems
B: Reusability of analysis, design and programming result
C: Improved communication between users, analysts etc
D: All of the above

Q. No. 214

Question:

Composition is a stronger form of which of the following?

Answer Choices

A: **Aggregation** B: Encapsulation

C: Inheritance D: All of the above

Q.No.215 The phenomenon where the object outlives the program execution time and exists between executions of a program is known as.	A. Global Object B. Persistent Object C. Genericity D. Delegation	B

Q.No.216 What is the output of the following code?
#include<iostream.h>
#include<string.h>
void main()
{
cout<<strlen(“Hello, World.\n”)<<” \n” ;
}
	A. 14
	B. 13
	C. 12
	D. None
		A

Q.No.217 Object-Oriented Programming Language supports	A. Inheritance B. Polymorphism C. Encapsulation D. All of the above	D

Q.No.218 What is the output of the following code?
#include<iostream.h>
void main()
{
/* this is /* an example */ of nested comment */
cout<<123<<endl;
}
	A. 123
	B. Compile time error
	C. None
	D. Run time Error
		B

Q.No.219 Abstraction is crucial to understanding	A. Class B. Application C. Object D. Control flow	C

Q.No.220 What is the output of the following code?
#include<iostream.h>
void main()
{
cout << ;
}
	A. 1
	B. Compile time error
	C. NIL
	D. None
		B

Q.No.221 Object oriented design decomposes a system into	A. Classes B. Objects C. Structures D. Methods	B

Q.No.222 What is the output of the following code?
#include<iostream.h>
void main()
{
int a = 20;
	A. 20, 20
	B. 20, 21
	C. 21, 22
	D. None
		D

int &n = a;
n=a++;
a=n++;
cout<<a <<" ,"<<n<<endl;
}		

Q.No.223 If a class member function is declared a const, the function	A. Does not change the value of any data member of that class B. Does not change the value of any data member of implied object C. Does not change the value of any data member of that class D. All of the above	B

Q.No.224 What is the output of the following code?
#include<iostream.h>
void main(){
int a = 20,b=100;
int &n = a;
n=a++;
n = &b;
cout<<a <<" ,"<<n<<endl;
}
	A. 21, 21
	B. 20, 21
	C. 21, 22
	D. Error
		D

Q.No.225 What is the output of the program?
#include <stdio.h>
float cal (float value){
return (3 * value);
}
void main(){
int a = 10;
float b = cal ("123");
}
	A. 369
	B. 123
	C. Compilation error
	D. None of the above
		C

Q.No.226 What is the output of the following code?
#include<iostream.h>
void main()
{
bool a=10;
cout<<a<<endl;
}
	A. 10
	B. false
	C. 1
	D. Error
		C

Q.No.227 The act of grouping into a single object, both data and the operation that affect that data is known as	A. Encapsulation B. Inheritance C. Abstraction D. None of the above	A

Q.No.228 What is the output of the following code?
#include<iostream.h>
void main()
{
int main;
main = 100;
cout<<main++<<endl;
}
	A. 101
	B. 100
	C. None
	D. Error: one cannot use main as identifier
		B

Q.No.229 What is a class?	A. It is a region of storage. B. It defines a data type. C. It is exactly same as a struct in c. D. All of the above.	B

Q.No.230 What is the output of the following code?
#include<iostream.h>
void main()
{
int a=0,x;
x = ++a * --a;
cout<<++a<< " " << a++ << " " << x <<endl;
}
	A. 0, 0, 0
	B. 2, 0, 0
	C. 2, 2, 2
	D. 3, 2, 2
		B

Q.No.231 What is the output of the program?
 	
#include <iostream.h>
 	
void main ()
{
for(int j = 1, sum = 0; j < 5; j++)
sum += j;
sum = j;
cout << sum;
}
	A. 5
	B. 10
	C. Compilation error: Undefined variable sum and j
	D. 6
		A

Q.No.232 What is the output of the following code?
#include<iostream.h>
void main()
{
a=32;
cout<<a<<endl;
int a;
}
	A. 32
	B. 0
	C. Compile time error
	D. Run time error
		C

Q.No.233 Which one supports unknown data types in a single framework?	A. Inheritance B. Virtual functions C. Templates D. Abstract Base Class	C

Q.No.234 Which of the following is not valid expression?	A. 33 / 9 / 3 B. 23 % (5 % 2) C. 34 (7 / 3) D. None	C
Q.No.235 Which one of the following statement represents inheritance in C++?	A. class car : public vehicle B. class car extends vehicle C. public class car extends vehicle D. class car inherits vehicle	A
Q.No.236 Evaluate the m%n++ expression, assuming m=24 and n=7	A. 4 B. 3 C. 2 D. None	B
Q.No.237 Which of the following keyword supports dynamic method resolution in C++ ?	A. abstract B. Virtual C. Dynamic D. Typeid	B
Q.No.238 Evaluate the m%++n expression, assuming m=24 and n=7	A. 4 B. 3 C. 2 D. None	D
Q.No.239 Which of the following statements is not correct?	A. You can create new operators like $ or @ B. You cannot change an operator's template C. Operators can only be overloaded when used with abstract data class D. Unary operators overloaded by means of a member functions takes no explicit arguments and return no explicit values	A

Q.No.240 Which of the following statement is true?	A. !(p || q) is the same as !p || !q B. !!!p is the same as !p C. p && q || r is the same as p && (q || r) D. None	B
Q.No.241 Which of the following is false about struct and class in C++?	A. The members and base classes of a struct are public by default, while in class, they are private by default B. Struct and class are otherwise functionally equivalent C. A class supports all the access specifiers like private, protected and public D. A struct cannot have protected access specifier	D
Q.No.242 Elements in an array are identified by a unique _____.	A. symbol B. order C. subscript D. data type	C
Q.No.243 The keyword *protected* is frequently used	A. For function overloading B. For protecting data C. For inheritance D. For security purpose	C
Q.No.244 An address is a _____, while a pointer is a _____.	A. variable, location B. variable, position C. constant, variable D. None	C
Q.No.245 Abstract base class is one, which has A.	A. All pure virtual functions B. At least one pure virtual function C. Functions with abstract keyword D. No pure virtual functions	B

Q.No.246 6.5 is a _____ constant.	A. string literal B. float literal C. double literal D. character literal	C
Q.No.247 What is exception handling?	A. Errors which occur at runtime B. When abnormal situation arises at compile time C. When errors occur at link time D. None of the above	A
Q.No.248 To execute a C++ program, one first need to translate the source code into object code. This process if called_____.	A. translating B. sourcing C. compiling D. coding	C

Q.No.249 What is the output of the program?
 	
#include <iostream.h>
inline int max(int x, int y)
{
return(x > y ? x : y);
}
 	
void main()
{
int(* max_func)(int,int)=max;
cout << max_func(75,33);
}
	A. 75
	B. Error - Undefined symbol max_func
	C. 33
	D. None of the above
		A

Q.No.250 What is wrong with the following program?
#include<iostream.h>
void main(){
do
{
int b=0;
cout<<b;
b++;
}while(b!=10);
}
	A. There is nothing wrong in the program.
	B. Variable 'b' must not be initialized in the loop
	C. Variable 'b' must not be declared in the loop
	D. The condition for while loop is not valid
		C

Q.No.251 Which of following is not a member of a class?	A. static function B. const function C. virtual function D. friend function	D
Q.No.252 Sending a copy of data to a program module is called _____.	A. recursion B. passing a reference C. passing a value D. None	C

Q.No.253 Which of the following is a correct statement?	A. Abstract class object can be created B. Pointer to abstract class can be created C. Reference to abstract class can be created D. Both B and C	D
Q.No.254 Each generic type in a template function definition is preceded by the keyword_____.	A. class B. type C. function D. template	A
Q.No.255 What does an empty class contain?	A. Default constructor B. Copy constructor C. Address of operator D. All of the above	D
Q.No.256 Which of the followings is not a C++ opoerator?	A. ^= B. .* C. &= D. ->>	D
Q.No.257 In protected derivation	A. Protected and public members of base class become protected B. Private, protected and public members of base class become protected C. Private, protected and public members of base class become private D. Protected and public members of base class become private	A

Q.No.258 What is the output of the following code?
#include<iostream.h>
void main()
{
char p[]="This is a test";
cout<<sizeof(p)<<","<<strlen(p);
}
	A. 14, 14
	B. 15, 14
	C. 14, 15
	D. 15, 15
		B

Q.No.259 What is the output of the program?
 	
#include <iostream.h>
 	
void main()
{
int j = 20, k = 30;
int & m = j;
int * n = &j;
cout << j << " " << k << " " << m << " ++ " ;
m = k;
cout << j << " " << k << " " << m << " ++ ";
n = &k; // n now points to k
cout << j << " " << k << " " << m << " " << *n << endl;
}
	A. 20 30 20 ++ 20 30 30 ++ 30 30 30 30
	
	B. 20 30 20 ++ 30 30 30 ++ 20 30 30 30
	
	C. 20 30 20 ++ 20 30 30 ++ 20 30 30 30
	
	D. 20 30 20 ++ 30 30 30 ++ 30 30 30 30
		D

Q.No.260 What is wrong with the following program?
#include<iostream.h>
void main(){
int a[5] = {0};
for(int i=0;i<2;i++)
a[i]=i;
for(int i=0;i<5;i++)
cout<<a[i]<<endl;
}
	A. Array 'a' is not initialized properly
	B. There is no problem
	C. Redeclaration of variable 'i'
	D. There is a run time error
		C

Q.No.261 Class istream in iostream.h is defined as	A. Class istream : public ios B. Class istream : public virtual ios C. Class istream : public iostream D. Class istream : public virtual iostream	B

Q.No.262 What is the output of the following code?
#include<iostream.h>
void main()
{
int a[5] = {100,2,3,22,400};
int b[5];
b=a;
for(int i=0;i<5;i++)
cout<<b[i]<<endl;
}
	A. 100,2,3,22,400
	B. garbage values
	C. error
	D. None
		C

Q.No.263 What is the size of empty class?	A. 0 bytes B. 2 bytes C. 1 byte D. 4 bytes	C

Q.No.264 What is the output of the following code?
#include<iostream.h>
void main(){
int a[5] = {1,2,3};
for(int i=0;i<5;i++)
cout<<a[i]<<endl;
}
	A. No output
	B. 1 2 3 garbage garbage
	C. 1 2 3 0 0
	D. There is a run time error
		C

Q.No.265 The advantage of defining a pure virtual member function in a class is	A. Derived class may implement the pure virtual function B. Derived class must implement the pure virtual function C. Derive class is abstract class if it does not implement the pure virtual function D. Both B and C	D
Q.No.266 To delete a dynamically allocated array named 'a' , the correct statement is	A. delete a; B. delete a[0]; C. delete []a; D. delete [0]a;	C

Q.No.267 What is the output of the following?
 	
#include
void main()
{
int x, y;
x=(3, 4, 5);
y=3, 4, 5;
cout << endl << x <<" "<< y;
}
	A. Compilation Error
	B. 3 5
	C. 3 3
	D. 5 3
		D

Q.No.268 Which of the followings is not a valid assignment statement?	A. total=9; B. name="OBJECT" ; C. profit=123.123; D. A='A' ;	B

Q.No.270 What is the output of the following?
#include <iostream.h>
void main ()
{
{
for(int x=1; x <= 5; x++, x+=5);
}
cout << endl << " value of x = " << x;
}
	A. 6
	B. 10
	C. compilation error
	D. 11
		C

Q.No.271 When do preprocessor directives execute?	A. Before the compiler compiles the program. B. After the compiler compiles the program. C. At the same time as the compiler compiles the program. D. None	A

Q.No.272 What is the output of the following?
#include <iostream.h>
void main ()
{
cout << (cout<<" Hello ") << " world ";
}
	A. No output is displayed
	B. Hello some_address_value world
	C. Hello world
	D. compilation error
		B

Q.No.273 What is the output of the following code?
#include<iostream.h>
void main()
{
int i=5,j=0;
while(i-- || j++)
{
cout<<i<<" "<<j<<" ,” ;
}
}
	A. 5 1, 4 2, 3 3, 2 4, 1 5
	B. 4 0, 3 0, 2 0, 1 0, 0 0
	C. 4 1, 3 2, 2 3, 1 4, 0 5
	D. None
		B

Q.No.274 The class fstreambuf serves as base class for	A. ifstream, ofstream, fstream B. ifstream, ofstream C. ostream D. ifstream	A

Q.No.275 What is the output of the following code?
#include<iostream.h>
void main(){
int a;
bool b;
a = 12 > 100;
b = 12 >= 100;
cout<<a<<" "<<b<<endl;
}
	A. Error
	B. 0 false
	C. 0 1
	D. 0 0
		D

Q.No.276 The scope resolution operator permits	A. Access to an identifier in the global scope that has been hidden by another identifier with the same name in the	A

	local scope B. Access to an identifier in the global space C. Access to an identifier in the local scope D. Access to an identifier in the local scope and global scope	

Q.No.277 What is the output of the following code?
#include<iostream.h>
int a = 1;
void main(){
int a = 100;
{
int a = 200;
{
int a = 300;
cout<<a<<",";
}
cout<<a<<",";
}
cout<<a<<",";
cout<<::a<<",";
}
	A. Error
	B. 100, 200, 300, 100,
	C. 300, 200, 100, garbage,
	D. 300, 200, 100, 1,
		D

Q.No.278 What is the output of the program?
#include <iostream.h>
void main()
{
int val = 5;
int &val1 = val;
int &val2;
cout << val1;
}
	A. 5
	B. val2 - references must be initialized
	C. Address of variable val is printed
	D. None of the above
		B

Q.No.279 What is the output of the following code?
#include<iostream.h>
void main()
{
int x=10;
(x<0)?(int a =100):(int a =1000);
cout<<a;
}
	A. Error
	B. 1000
	C. 100
	D. None
		A

Q.No.280 The technique of allocating memory during runtime on demand is known as	A. Dynamic binding B. Dynamic memory allocation C. Late binding	C

	D. Template	

Q.No.281 What is the output of the following code?
#include<iostream.h>
void main()
{
int a = 0;
cout<<(a = 10/a);
}
	A. 0
	B. 1
	C. Compile Time error
	D. Runtime Error
		D

Q.No.282 What is the output of the following code?
void main(){
int i=1;
while(i<=10);
{
cout<<i;
i++;
}
}
	A. 1 2 3 …. 10
	B. Infinite loop
	C. 10
	D. 1 2 3 …9
		B

Q.No.283 What is the output of the following code?
#include<iostream.h>
void main()
{
int x=0;
while(x++<5)
{
static x;
x+=2;
cout<<x<<" ";
}
}
	A. 1 2 3 4 5
	B. 2 4 6 8 10
	C. Compile Time error
	D. Runtime Error
		B

Q.No.284 The advantage of defining a pure virtual member function in a class is	A. Derived class may implement the pure virtual function B. Derived class must implement the pure virtual function C. Derive class is abstract class if it does not implement the pure virtual function D. Both B and C	D
Q.No.285 What is the output of the following code? #include<iostream.h> void main() { char str1[]=" India" , str2[]=" India" ;	A. Both the string are same B. Both the string are not same C. Compile Time	B

if(str1==str2)
cout<<"Both the string are same" ;
else
cout<<"Both the string are not same" ;
}
	error
	D. Runtime Error	

Q.No.286 Input and output operators are known as	A. extraction and insertion B. get from and put to C. Both A and B D. None of the above	C

Q.No.287 What is the output of the following code if user enters " This is a test" ?
#include<iostream.h>
#include<string.h>
void main()
{
char str[8];
cin>>str;
cout<<str;
}
	A. This is a test
	B. This is a
	C. This
	D. Error
		C

Q.No.288 A file can be tied to your program by defining an instance of	A. fstream B. ifstream C. ofstream D. All of the above	D

Q.No.289 What is the output of the following code?
#include<iostream.h>
void main(){
int arr[] = {10,20,30,40,50};
int *ptr = arr;
cout<< *ptr++<<" "<<*ptr;
}
	A. 10 20
	B. 10 10
	C. 20 20
	D. 20 10
		B

Q.No.290 Which of the following is not true about constructor?	A. constructor can be overloaded B. constructor return type is int C. constructor has the same name as the class in which it is defined D. constructor are used for initializing data members	B

Q.No.291 What is the output of the following code?
#include<iostream.h>
void main()
{
int arr[] = {10,20,30,40,50};
int x,*ptr1 = arr, *ptr2=&arr[3];
	A. 6
	B. 3
	C. Compile Time error
	D. Runtime Error
		B

x = ptr2 - ptr1;
cout<<x;
}		

Q.No.292 What is the output of the program?
#include <iostream.h>
char *buf1 = "Genesis", *buf2 = "InSoft";
void main()
{
const char *p = buf1;
p = buf2;
*p = 'g';
cout << *p;
}
What is the output of the program?
	A. g
	B. genesis
	C. No ouput is displayed
	D. l-value specifies constant object
		D

Q.No.293 Which of the following statement is false about pointers?	A. The ++ and -- operators may be used with pointer variables B. An integer may be added and subtracted from a pointer variable C. A pointer may be added to another pointer. D. A pointer may be subtracted from another pointer.	C
Q.No.294 A null pointer is a pointer that contains	A. the address 0 B. the address that points to 0 C. the address that points to '\0' D. the address that points to -1	A

Q.No.295 What is the output of the program?
#include <iostream.h>
class test
{
int x;
public:
test(int y)
{
x = y;
}
int getX()
{
int x = 40;
	A. Compilation error
	B. 10
	C. 40
	D. None of the above
		C

```
        return this->x;
    }
};

void main()
{
    test a(10);
    cout << a.getX();
}
```