C++ Institute

Exam CPP

C++ Certified Professional Programmer

Verson: Demo

[Total Questions: 10]

Topic break down

Topic	No. of Questions
Topic 1: Volume A	7
Topic 2: Volume B	3

Topic 1, Volume A

Question No : 1 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <deque>
#include <iostream>
#include <algorithm>
#include <set>
using namespace std;
template<class T>struct Out {
ostream & out;
Out(ostream & o): out(o){}
void operator() (const T & val ) { out<<val<<" "; }
};
bool Compare(char a, char b) { return tolower(a) < tolower(b);}
int main() {
char s[]={"qwerty"};
char t1[]={"ert"};
char t2[]={"ERT"};
sort(s, s+6);
cout<<includes(s,s+6, t1,t1+3, Compare)<<" "<<includes(s,s+6, t2,t2+3, Compare)<<endl;
return 0;
}
```

Program outputs:

A. 0 0

B. 0 1
C. 1 0
D. 1 1

Answer: D

Question No : 2 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <deque>

#include <vector>

#include <iostream>

#include <string>

using namespace std;

template<typename T>

void print(T start, T end)

{

while (start != end)

cout<<*start++;

}

int main ()

{

string t[] = {"one", "two" ,"three" ,"four", "five"};

vector<string>v1(t, t+5);

deque<string>d1(v1.rbegin(), v1.rend());

d1.push_back("zero");

print(d1[0].rbegin(),d1[0].rend());
```

```
return 0;

}
```

A. program outputs: orez
B. program outputs: evif
C. compilation error
D. program outputs: five

Answer: B

Question No : 3 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <vector>

using namespace std;

int main ()

{

std::vector<int>v1;

v1.push_back(10);

return 0;

}
```

A. compilation fails due to error in line 2
B. compilation fails due to error in line 5
C. exception is thrown during run time
D. code compiles and executes successfully

Answer: D

Question No : 4 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <iostream>


using namespace std;


void g(int a)

{

cout<<a?1<<endl;

}


template<class A>

void g(A a)

{

cout<<a+1<<endl;

}



int main()

{

int a = 1;

g(a);

return 0;

}
```

A. program displays: 0
B. program displays: 2
C. compilation error
D. runtime exception

Answer: A

Question No : 5 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <iostream>

#include <algorithm>

#include <vector>

using namespace std;


int main () {

int t[] = {1,2,3,4,5,1,2,3,5,4};

vector<int> v (t,t+10);

vector<int>::iterator it;

int m1[] = {1, 3, 2};

it = find_end (v.begin(), v.end(), m1, m1+3);

if (it != v.end())

cout << "Found at position: " << it?v.begin() << endl;

return 0;

}
```

A. program outputs: Found at position: 5
B. program outputs: Found at position: 0
C. no output
D. program outputs: Found at position: 10

Answer: C

Question No : 6 - (Topic 1)

What happens when you attempt to compile and run the following code?

```
#include <deque>

#include <iostream>

#include <algorithm>

using namespace std;

class B { int val;

public:

B(int v):val(v){}

int getV() const {return val;}  bool operator < (const B & v) const { return val<v.val;} };

ostream & operator <<(ostream & out, const B & v) { out<<v.getV(); return out;}

template<class T>struct Out {

ostream  & out;

Out(ostream & o): out(o){}

void operator() (const T & val ) { out<<val<<" "; } };

int main() {

int t[]={8, 10, 5, 1, 4, 6, 2, 7, 9, 3};

deque<B> d1(t, t+10);

sort(d1.begin(), d1.end());

deque<B>::iterator it = upper_bound(d1.begin(), d1.end(), B(4));

for_each(it, d1.end(), Out<B>(cout)); cout<<endl;

return 0;

}
```

Program outputs:

A. 5 6 7 8 9 10
B. 4 5 6 7 8 9 10
C. 6 7 8 9 10

D. 1 2 3 4 5
E. 1 2 3 4

Answer: A

Question No : 7 - (Topic 1)

Given three files: class.h, class.cpp and main.cpp containing small C++ project, which sentences are TRUE if you attempt to compile and run the program? Assume that the whole compiling environment is properly set.

```
// File: main.cpp

#include <iostream>

#include "class.h"

using namespace std;


int main()

{

A<int> a;

cout << a.getV() << endl;

return 0;

}


//File: class.h

#ifndef _CLASS_

#define _CLASS_

template <class T>

class A {

T_v;
```

```
public:

A() {}

A(T v);

T getV();

};

#endif


//File: class.cpp

#include "class.h"


template<typename T>

A<T>::A(T v):_v(v) {}


template<class T>

T A<T>::getV() { return _v; }
```

A. program will display: 0
B. program will not compile
C. program will display unpredictable number
D. program willl be not linked

Answer: D

Topic 2, Volume B

Question No : 8 - (Topic 2)

What happens when you attempt to compile and run the following code?

```
#include <vector>

#include <iostream>
```

```
#include <algorithm>

using namespace std;

template<typename T>class B { T val;

public:

B(T v):val(v){}

T getV() const {return val;}  bool operator < (const B & v) const { return val<v.val;} };

template<class T>ostream & operator <<(ostream & out, const B<T> & v) { out<<v.getV();
return out;}

template<class T>struct Out {

ostream  & out;

Out(ostream & o): out(o){}

void operator() (const T & val ) { out<<val<<" "; } };

bool Less(const B<float> &a, const B<float> &b) { return int(a.getV())<int(b.getV());}

int main() {

float t[]={2.28, 1.66, 1.32, 3.94, 3.64, 2.3, 2.98, 1.96, 2.62, 1.13};

vector<B<float> > v1; v1.assign(t, t+10);

stable_sort(v1.begin(), v1.end(), Less);

for_each(v1.begin(), v1.end(), Out<B<float> >(cout));cout<<endl;



return 0;

}
```

Program outputs:

A. 1.66 1.32 1.96 1.13 2.28 2.3 2.98 2.62 3.94 3.64
B. 1.13 1.32 1.66 1.96 2.28 2.3 2.62 2.98 3.64 3.94
C. compilation error
D. 3.94 3.64 2.98 2.62 2.3 2.28 1.96 1.66 1.32 1.13
E. the exact output is impossible to determine

Answer: A

Question No : 9 - (Topic 2)

What will be output of the program when you attempt to compile and run the following code?

```
#include <iostream>

#include <map>

#include <vector>

#include <string>

using namespace std;

int main(){

int second[] ={ 3, 4, 2, 1, 6, 5, 7, 9, 8, 0 };

string first[] = {"three", "four", "two", "one", "six","five", "seven", "nine","eight","zero"};

multimap<int,string> m;

for(int i=0; i<10; i++) {

m.insert(pair<int,string>(second[i],first[i]));

}

m[0]="ten";

m.insert(pair<int,string>(1,"eleven"));

for(multimap<int, string>::iterator i=m.begin();i!= m.end(); i++) {

cout<<i?>second<<" ";

}

return 0;

}
```

A. zero one two three four five six seven eight nine

B. ten one two three four five six seven eight nine
C. zero eleven two three four five six seven eight nine
D. ten eleven two three four five six seven eight nine
E. compilation error

Answer: E

Question No : 10 - (Topic 2)

What happens when you attempt to compile and run the following code?

```
#include <iostream>

#include <set>

#include <vector>

using namespace std;

int main(){

int myints[] ={ 3, 4, 2, 1, 6, 5, 7, 9, 8, 0 };

vector<int>v(myints, myints+10);

set<int> s1(v.begin(),v.end());

s1.insert(v.begin(),v.end());

s1.erase(s1.lower_bound(2),s1.upper_bound(7));

for(set<int>::iterator i=s1.begin();i!= s1.end(); i++) {

cout<<*i<<" ";

}

return 0;

}
```

A. program outputs: 0 1 8 9
B. program outputs: 2 3 4 5 6 7
C. program outputs: 1 6 5 7
D. program outputs: 3 4 9 8 0

Answer: A