

Exam : CPP-22-02

**Title : CPP - C++ Certified
Professional Programmer**

Version : DEMO

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

```
#include <iostream>
#include <set>
#include <vector>
using namespace std;
int main(){
int t[] ={ 3, 4, 2, 1, 6, 5, 7, 9, 8, 0 };
vector<int>v(t, t+10);
multiset<int> s1(v.begin(),v.end());
s1.insert(v.begin(),v.end());
pair<multiset<int>::iterator,multiset<int>::iterator> range;
range = s1.equal_range(6);
while (range.first != range.second) {
cout<<*range.first<<" "; range.first++;
}
return 0;
}
```

- A.program outputs: 6 6
- B.program outputs: 5 7
- C.program outputs: 5 5 6 6 7 7
- D.program outputs: 5 5 7 7
- E.program outputs: 1 1 6 6 5 5

Answer: A

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

```
#include <vector>
#include <iostream>
#include <algorithm>
using namespace std;
template<class T>struct Out {
ostream & out;
Out(ostream & o): out(o){}
void operator()(const T & val ) {
out<<val<<" ";
}
};
struct Sequence {
int start;
Sequence(int start):start(start){}
int operator()() {
return start++ ; };
int main() {
vector<int> v1(10);
generate(v1.rbegin(), v1.rend(), Sequence(1));
```

```
rotate(v1.begin(),v1.begin() + 1, v1.end() );  
for_each(v1.begin(), v1.end(), Out<int>(cout) );cout<<endl;  
return 0;  
}
```

Program outputs:

A.1 2 3 4 5 6 7 8 9 10

B.10 9 8 7 6 5 4 3 2 1

C.9 8 7 6 5 4 3 2 1 10

D.1 10 9 8 7 6 5 4 3 2

Answer: C

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

```
#include <iostream>  
#include <fstream>  
#include <string>  
#include <list>  
#include <algorithm>  
#include <iomanip>  
using namespace std;  
class B { int val;  
public:  
B(int v=0):val(v){}  
int getV() const {return val;}  
operator int() const { return val; };  
template<class T>struct Out {  
ostream & out;  
Out(ostream & o): out(o){}  
void operator() (const T & val ) {out<<setw(3)<<hex<<val; } };  
int main () {  
int t[] = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10};  
fstream f("test.out", ios::trunc|ios::out);  
list<B> l(t, t+10);  
for_each(l.begin(), l.end(), Out<B>(f));  
f.close();  
f.open("test.out");  
for( ; f.good() ; ) {  
B i;  
f>>i;  
cout<<i<<" ";  
}  
f.close();  
return 0;  
}
```

A.file test.out will be opened writing

- B.file test.out will be truncated
- C.file test.out will be opened for reading
- D.compilation error
- E.program will display sequence 1 2 3 4 5 6 7 8 9 10

Answer: D

4.What will happen when you attempt to compile and run the code below, assuming that you enter the following sequence: one two three<enter>?

```
#include <iostream>
#include <string>
using namespace std;
int main ()
{
string a;
cin>>a;
cout<<a<<endl;
return 0;
}
```

Program will output:

- A.one
- B.one two three
- C.runtime exception
- D.compilation error
- E.the result is unspecified

Answer: A

5.What will happen when you attempt to compile and run the following code?

```
#include <iostream>
#include <map>
#include <vector>
#include <sstream>
#include <string>
using namespace std;
int main() {
int t[] = { 3, 4, 2, 1, 0, 3, 4, 1, 2, 0 };
vector<int> v(t, t + 10);
multimap<int, string> m;
for (vector<int>::iterator i = v.begin(); i != v.end(); i++) {
stringstream s;s << *i << *i;
m.insert(pair<int, string>(*i, s.str()));
}
pair<multimap<int, string>::iterator, multimap<int, string>::iterator> range;
range = m.equal_range(2);
for (multimap<int, string>::iterator i = range.first; i != range.second; i++) {
```

```
cout << i?>first << " ";  
}  
return 0;  
}
```

The output will be:

A.2 2

B.1 2

C.1 3

D.2

E.0 2

Answer: A