C++ Programming Associate Exam

1. What will the variable "age" be in class B?

```
class A {
int x;
protected:
int y;
public:
int age;
A () { age=5; };
};
class B : public A {
string name;
public:
B () { name="Bob"; };
void Print() {
cout << name << age;
}
};
```

A. public

B. private

C. protected

D. None of these

Answer(s): A

---

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

```
#include
#include
using namespace std;
class complex{
double re, im;
public:
```

```
complex() : re(1),im(0.4) {}
complex operator?(complex &t);
void Print() { cout << re << " " << im; }
};
complex complex::operator? (complex &t){
complex temp;
temp.re = this?>re ? t.re;
temp.im = this?>im ? t.im;
return temp;
}
int main(){
complex c1,c2,c3;
c3 = c1 ? c2;
c3.Print();
}
```

A. It prints: 1 0.4

B. It prints: 2 0.8

C. It prints: 0 0

D. It prints: 1 0.8

Answer(s): C

---

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

```
#include
using namespace std;
class complex{
double re;
double im;
public:
complex() : re(0),im(0) {}
complex(double x) { re=x,im=x;};
complex(double x,double y) { re=x,im=y;}
void print() { cout << re << " " << im;}
};
int main(){
complex c1;
c1 = 3.0;
```

```
c1.print();
return 0;
}
```

A. It prints: 0 0

B. It prints: 1 1

C. It prints: 3 3

D. Compilation error

Answer(s): C

---

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

```
#include
using namespace std;
void fun(int);
int main()
{
int a=0;
fun(a);
return 0;
}
void fun(int n)
{
if(n < 2)
{
fun(++n);
cout << n;
}
}
```

A. It prints: 21

B. It prints: 012

C. It prints: 0

D. None of these

Answer(s): A

---

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

```
#include
using namespace std;
int s(int n);
int main()
{
int a;
a = 3;
cout << s(a);
return 0;
}
int s(int n)
{
if(n == 0) return 1;
return s(n?1)*n;
}
```

A. It prints: 4

B. It prints: 6

C. It prints: 3

D. It prints: 0

Answer(s): B

---

6. What will be the output of the program?

```
#include
using namespace std;
int fun(int);
int main()
{
cout << fun(5);
return 0;
}
int fun(int i)
{
return i*i;
}
```

A. 25

B. 5

C. 0

D. 1

Answer(s): A

---

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

```
#include
using namespace std;
#define FUN(arg) if(arg) cout<<"Test";
int main()
{
int i=1;
FUN(i<3);
return 0;
}
```

A. It prints: 0

B. It prints: T

C. It prints: T0

D. It prints: Test

Answer(s): D

---

8. What will the variable "y" be in class B?

```
class A {
int x;
protected:
int y;
public:
int age;
};
class B : private A {
string name;
public:
void Print() {
cout << name << age;
}
};
```

A. public

B. private

C. protected

D. None of these

Answer(s): B

---

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

```
#include
```

```
using namespace std;
int main()
{
float x=3.5,y=1.6;
int i,j=2;
i = x + j + y;
cout << i;
return 0;
}
```

A. It prints: 7

B. It prints: 6

C. It prints: 7,1

D. Compilation error

Answer(s): A

---

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

```
#include
using namespace std;
int main(){
int i = 1;
if (i==1) {
cout << i;
} else {
cout << i-1;
}
return 0;
}
```

A. It prints: 0

B. It prints: 1

C. It prints: -1

D. It prints: 2

Answer(s): B

---

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

```
#include
#include
using namespace std;
class complex{
double re, im;
public:
complex() : re(1),im(0.4) {}
complex operator+(complex &t);
void Print() { cout << re << " " << im; }
};
complex complex::operator+ (complex &t){
complex temp;
temp.re = this?>re + t.re;
temp.im = this?>im + t.im;
return temp;
}
int main(){
complex c1,c2,c3;
c3 = c1 + c2;
c3.Print();
}
```

A. It prints: 1 0.4

B. It prints: 2 0.8

C. It prints: 0 0

D. Garbage value

Answer(s): B

---

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

```
#include
#include
using namespace std;
float* sum(float a,float b);
float* sum(float a,float b)
{
float *f = new float;
*f = a+b;
return f;
}
int main()
{
float a,b,*f;
a = 1.5; b = 3.4;
f = sum(a,b);
cout<<*f;
return 0;
}
```

A. It prints: 0

B. It prints: 4.9

C. It prints: 5

D. It prints: 4

Answer(s): B

---

13. Which statement should be added in the following program to make work it correctly?

```
using namespace std;
int main (int argc, const char * argv[])
{
```

cout<<"Hello";
}

A. #include

B. #include

C. #include

D. #include

Answer(s): C

---

14. What is the output of the program?
#include
using namespace std;
int main()
{
int tab[4]={10,20,30,40};
tab[1]=10;
int *p;
p=&tab[0];
cout<<*p;
return 0;
}

A. It prints: 10

B. It prints: 20

C. It prints: 11

D. It prints: 30

Answer(s): A

---

15. What happens when you attempt to compile and run the following code?
#include
using namespace std;

```
int fun(int x) {
return 2*x;
}
int main(){
int i;
i = fun(1) & fun(0);
cout << i;
return 0;
}
```

A. It prints: 0

B. It prints: 1

C. It prints: -1

D. Compilation error

Answer(s): A

---

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

```
#include
using namespace std;
class A {
public:
virtual void Print()=0;
};
class B:public A {
public:
virtual void Print() { cout<< "B"; }
};
class C:public A {
public:
virtual void Print() { cout<< "C"; }
};
int main()
{
B ob2;
C ob3;
A *obj;
obj = &ob2;
```

```
obj?>Print();
obj = &ob3;
obj?>Print();
}
```

A. It prints: BC

B. It prints: CB

C. It prints: CC

D. It prints: BB

Answer(s): A

---

17. What will the variable "age" be in class B?

```
class A {
int x;
protected:
int y;
public:
int age;
};
class B : private A {
string name;
public:
void Print() {
cout << name << age;
}
};
```

A. public

B. private

C. protected

D. None of these

Answer(s): B

---

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

```
#include
using namespace std;
int x=5;
static int y;
int i=0;
void static myFunction()
{
y=x++ + ++i;
}
int main (int argc, const char * argv[])
{
x++;
myFunction();
cout<}
```

A. Compilation fails

B. It prints: 5 5 0

C. It prints: 7 7 1

D. It prints: 6 5 1

Answer(s): C

---

19. Which of the structures is incorrect?

```
1:
struct s1{
int x;
long int li;
};
2:
struct s2{
float f;
struct s2 *s;
};
3:
```

```
struct s3{
float f;
struct s3 s;
};
```

A. 1

B. 2

C. 3

D. 2, 3

Answer(s): C

---

20. What is the output of the program?

```
#include
#include
using namespace std;
int main()
{
string s1="Wo";
string s2;
s2 = s1;
string s3;
s3 = s2.append("rldHello");
cout << s3;
return( 0 );
}
```

A. It prints: WorldHello

B. It prints: HelloWo

C. It prints: World

D. It prints: Hello

Answer(s): A