Software Engineering

```
Home ► My courses ► Previous Years ► 2020-21 ► Spring Semester (2020-21) ► Software Engineering ► Theory Quiz - 1 ► Theory Quiz: 1
```

```
Started on Wednesday, 27 January 2021, 2:15 PM
```

State Finished

Completed on Wednesday, 27 January 2021, 3:07 PM

Time taken 52 mins 8 secs

Grade 15.00 out of 15.00 (**100**%)

Question 1

Correct

Mark 1.00 out of 1.00

Flag question

Consider the following program.

```
#include <iostream>
using namespace std;

int main() {
   int i = 0;
   cout << sizeof(&i) << " ";
   cout << sizeof(void*);

   return 0;
}</pre>
```

What are the possible outputs of the above program?

Select one or more:

```
4 8

8 8

4 4
```

8 4

Your answer is correct.

The correct answer is:

8 8

4 4

Question 2

Correct

Mark 2.00 out of 2.00

Flag question

Consider the program below where the declarator and qualifer for variable $\,i\,$ is missing.

```
#include <iostream>
#include <cmath>
using namespace std;

int& func(int& a) {
    _____ i = a; // Declarator needed
    return i;
}

int main() {
    int a = 16;
    int& b = func(a);
    a = sqrt(sqrt(sqrt(sqrt(a))));

    cout << b + a << endl;
    return 0;
}</pre>
```

Given below are different fill-up options for the declarator,

Option # Declarator

- (a) int
- (b) int&
- (c) const int
- (d) static int

and the outcome from the program as filled up. Option # Outcome (1) Compilation Error (2) 17 (3) Segmentation fault / Indeterminate value (4) Match every fill-up option with the corresponding outcome. const int | compilation error Segmentation fault / Indeterminate value int 2 int& static int 17 Your answer is correct. The correct answer is: const int compilation error, int - Segmentation fault / Indeterminate value, int& - 2, static int -17Choose the equivalent expression using operator function/s for the expression in the following statement: c = a + b; Select one: operator+(operator=(c, a), b); =(c, +(a, b);

Question 3

Mark 0.50 out of

Flag question

Correct

0.50

```
operator=(c, add(a, b));

operator=(c, operator+(a, b));
```

The correct answer is:

```
operator=(c, operator+(a, b));
```

Question 4

Correct

Mark 1.00 out of 1.00

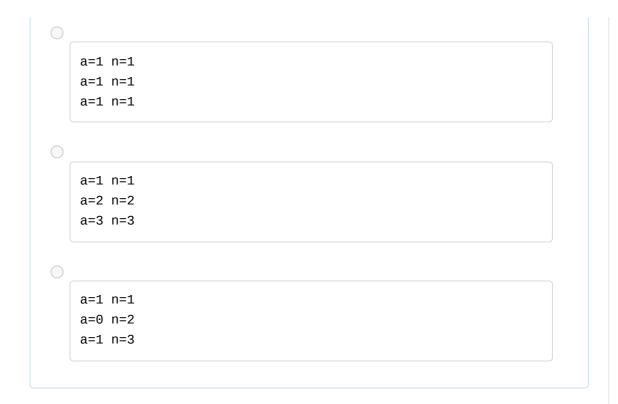
Flag question

What will be the output of the following program?

```
#include <iostream>
using namespace std;
class num {
    int a;
    static int n;
public:
    num() : a(0) {
        ++n;
        a += n % 2 * n;
        cout << "a=" << a << " " << "n=" << n << endl;
    }
};
int num::n = 0;
int main() {
    num x, a[2];
    return 0;
}
```

Select one:

```
a=1 n=1
a=0 n=2
a=3 n=3
```



The correct answer is:

a=1 n=1 a=0 n=2 a=3 n=3

Question 5

Correct

Mark 1.00 out of 1.00



Match the purpose with the mechanism between the lists.

Option # Purpose

- (a) Efficient transfer of value from caller to callee
- (b) Reliable transfer of value of local variable from callee to caller
- (c) Necessary to use a function as an Ivalue
- (d) Safe transfer of value from caller to callee

and the outcome from the program as filled up.

Option # Mechanism

- (1) Call-by-Value
- (2) Call-by-Reference
- (3) Return-by-Value
- (4) Return-by-Reference

Efficient transfer of value from caller to callee

Call-by-Reference





Reliable transfer of value of local variable from callee to caller

Necessary to use a function as an Ivalue

Safe transfer of value from caller to callee

Return-by-Value

Call-by-Value

Call-by-Value

Your answer is correct.

The correct answer is: Efficient transfer of value from caller to callee

- Call-by-Reference, Reliable transfer of value of local variable from callee to caller
- Return-by-Value, Necessary to use a function as an Ivalue
- Return-by-Reference, Safe transfer of value from caller to callee
- Call-by-Value

Question 6

Correct

Mark 1.00 out of 1.00

Flag question

What will be the output of the following program?

```
#include <iostream>
using namespace std;

#define MM_1(x, y) x * y

#define MM_2(x, y) (x * y)

#define MM_3(x, y) (x) * (y)

inline int MPLY(int x, int y) { return x * y; }

int main() {
    int a = 3, b = 4;

    cout << "MM_1:" << MM_1(MM_1(a + 1, b - 1), a + b) << endl;
    cout << "MM_2:" << MM_2(MM_2(a + 1, b - 1), a + b) << endl;
    cout << "MM_3:" << MM_3(MM_3(a + 1, b - 1), a + b) << endl;
    cout << "MPLY:" << MPLY(MPLY(a + 1, b - 1), a + b) << endl;
    return 0;
}
```

Select one:

```
MM_1:8
MM_2:22
MM_3:84
MPLY:84
MM_1:8
MM_2:8
MM_3:84
MPLY:84
MM_1:8
MM_2:22
MM_3:22
MPLY:84
MM_1:8
MM_2:84
MM_3:84
MPLY:84
```

The correct answer is:

```
MM_1:8
MM_2:22
MM_3:84
MPLY:84
```

Question 7

Correct

Mark 1.00 out of 1.00

Flag question

Consider the following program.

```
int main() {
   int a[] = { 1, 2, 3, 4, 5 };
   int *arr[5] = { a, a + 1, a + 2, a + 3, a + 4 };
   int *p = a + 4;

   cout << p[*arr[1] - 5];

   cin >> *p;
   return 0;
}
```



The correct answer is:

2

Question 8

Correct

Mark 0.50 out of 0.50

Flag question

What is the output of the following program/

```
#include<iostream>
using namespace std;

class xyz {
public:
    xyz() {
        cout << "Hi" << endl;
    }
} p;

int main() {
    cout << "I am in main" << endl;
    return 0;
}</pre>
```

Select one:



The correct answer is:

Ηi

I am in main

Question 9

Correct

Mark 1.00 out of 1.00

Flag question

What will be the output of the following program?

```
#include <iostream>
using namespace std;
int i = 0;
class A {
public:
   \sim A() \{ i = 10; \}
};
int fun() {
   i = 3;
   A obj;
   return i++;
}
int main() {
    cout << fun() << " ";
    cout << i << endl;</pre>
   return 0;
}
```

Select one:

3 10

10 11

4 10

3 4

Your answer is correct.

The correct answer is:

3 10

Question 10 Consider classTest. What are the permissible signatures of a Copy Constructor? Correct Mark 0.50 out of Select one: 0.50 Flag question Test(const Test& t), Test(Test& t); Test(const Test t), Test(Test t); Test(const Test* t), Test(Test* t); Test(Test& t), Test(Test* t); Your answer is correct. The correct answer is: Test(const Test& t), Test(Test& t);

Question 11

Correct

Mark 1.00 out of 1.00

Flag question

What will be the output from the program below?

```
#include <iostream>
 using namespace std;
 class sample {
     int i;
     double d;
 public:
     sample(int i_, double d_) : i(i_), d(d_) { }
     void print(int i, double d) {
         cout << i << " " << d << endl;
         cout << this->i << " " << this->d << endl;</pre>
     }
 };
 int main() {
     sample s(2, 3);
     s.print(5, 6);
     return 0;
 }
Select one:
```

5 6 2 3

 \checkmark

2 3 5 6

2 3 2 3

5 6 5 6

Your answer is correct.

The correct answer is:

5 6 2 3

Question 12

Correct

Mark 2.00 out of 2.00



For a singleton class QueenOfEngland below, we have an application in main(). Two lines of the class (line-1 and line-2) are partially blank and need to be filled up properly.

```
#include <iostream>
using namespace std;
class QueenOfEngland {
  static QueenOfEngland* _myQueen;
  static int reign;
  QueenOfEngland() { reign++; }
public:
  const static QueenOfEngland& queen() {
    if (!_myQueen)
       _myQueen = _____; // line-1
    return _____; // line-2
  }
  void Reign() const { cout << reign << " "; }</pre>
};
QueenOfEngland* QueenOfEngland::_myQueen = NULL;
int QueenOfEngland::reign = 0;
int main() {
  QueenOfEngland::queen().Reign();
  QueenOfEngland::queen().Reign();
  QueenOfEngland::queen().Reign();
  return 0;
}
```

Given below are different fill-up options,

Options# line-1

line-2

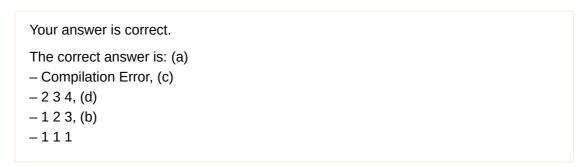
- (a) new QueenOfEngland() _myQueen
- (b) new QueenOfEngland()*_myQueen
- (c) new QueenOfEngland() *new QueenOfEngland()
- (d) NULL *new QueenOfEngland()

and the outcome from the program as filled up.

Option # Outcome

(1) 234

Option # Outcome (2) Compilation Error (3) 1 2 3 (4) 1 1 1 Match every fill-up option with the corresponding outcome. (a) Compilation Error (c) 2 3 4 (d) 1 2 3 (b) 1 1 1 V



Question 13

Correct

Mark 1.00 out of 1.00



Consider the following program.

```
#include <cstdio>
#include <cstdlib>
using namespace std;

int main() {
    int *p = (int*)malloc(sizeof(int));
    *p = 0x5E6A3D1B;
    unsigned char *q = (unsigned char*)p;
    printf("%X\n", *(q + 1));

    return 0;
}
```

What will be the output?

Select one:



3D





The correct answer is:

3D

Question 14

Correct

Mark 1.00 out of 1.00

Flag question

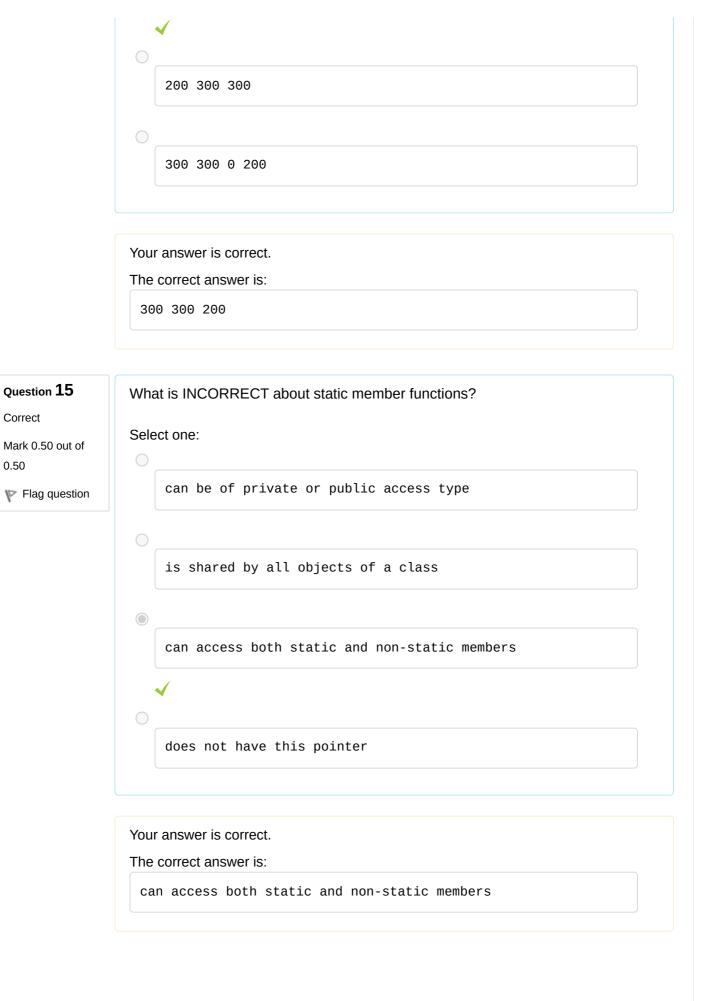
What will be the output of the program below?

```
#include <iostream>
using namespace std;
class student {
    int mark;
public:
    student(): mark(0) { }
    student(int x): mark(x) { }
    student(const student& s): mark(s.mark) { }
    ~student() { cout << mark << " "; }
};
int main() {
    student s1(200);
    student s2();
    student s3 = 300;
    student s4 = s3;
    return 0;
}
```

Select one:

Syntax error in declaring object

300 300 200



Finish review

Correct

0.50

QUIZ NAVIGATION

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Show one page at a time

Finish review

You are logged in as Nisarg Upadhyaya (Log out) CS20006_S2021