

## Student Result

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**Exam:** C++

**Score:** 38.0/45.0

**Percentage:** 84.44%

### Question-wise Summary

| Sr.no | Question                                                                                                                                                                     | Selected Answer   | Correct Answer    |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|
| 1     | What will be the output of the following C++ program?<br>#include <iostream><br>using namespace std; int main() {<br>#include <cmath><br>cout << sqrt(25);<br>return 0;<br>} | Compilation error | Compilation error |

|   |                                                                                                                                                                                                                 |                        |                        |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|------------------------|
| 2 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     cout &lt;&lt; "Hello World";     return 0; }</pre>                            | <b>Hello<br/>World</b> | <b>Hello<br/>World</b> |
| 3 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     float x = 5.75;     int y = 3;     cout &lt;&lt; x / y;     return 0; }</pre> | <b>1.91</b>            | <b>1.91</b>            |

|   |                                                                                                                                                                                                                                 |                   |                   |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------|
| 4 | <p>What will be the output of the following program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     double d = 5.7;     int i = static_cast&lt;int&gt;(d);     cout &lt;&lt; i;     return 0; }</pre> | 5                 | 5                 |
| 5 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     const int x = 10;     x = 20;     cout &lt;&lt; x;     return 0; }</pre>                      | Compilation Error | Compilation Error |

|   |                                                                                                                                                                                                                                         |       |       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| 6 | <p>What will be the output of the following C++ code?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int x = 5,         y = 3;     cout &lt;&lt; (x &amp; y);     return 0; }</pre>                           | 1     | 1     |
| 7 | <p>What will be the output of the following program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int x = 5;     cout &lt;&lt; ++x &lt;&lt; " " &lt;&lt; x++ &lt;&lt; " " &lt;&lt; x;     return 0; }</pre> | 6 5 7 | 6 6 7 |

8

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
int main() {
    int x = 10, y = 20;
    if (x < y) {
        cout << "x is less than y";
    } else if (x > y) {
        cout << "x is greater than y";
    } else {
        cout << "x is equal to y";
    }
    return 0;
}
```

**x is less than y**

**x is less than y**

|    |                                                                                                                                                                                                                                                                                            |           |           |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------|
| 9  | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     for (int i = 0; i &lt; 5; i++) {         cout &lt;&lt; i &lt;&lt; " ";     }     return 0; }</pre>                                                       | 0 1 2 3 4 | 0 1 2 3 4 |
| 10 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     for (int i = 0; i &lt; 5; i++) {         if (i == 3) {             continue;         }         cout &lt;&lt; i &lt;&lt; " ";     }     return 0; }</pre> | 0 1 2 4   | 0 1 2 4   |

|    |                                                                                                                                                                                                                                   |                             |                             |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|
| 11 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; void displayMessage() { cout &lt;&lt; "Hello from function!"; } int main() { displayMessage(); return 0; }</pre> | <p>Hello from function!</p> | <p>Hello from function!</p> |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------------|

12

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void display(int a) { cout << "Integer: " << a; }
void display(double a) { cout << "Double: " << a; }
int main()
{
    display(5);
    display(3.14);
    return 0;
}
```

**Integer:**  
**5**  
**Double:**  
**3.14**

**Integer:**  
**5**  
**Double:**  
**3.14**

13

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void greet(string name, string message = "Hello")
{ cout << message << ", " << name; }
int main()
{
    greet("Alice");
    return 0;
}
```

**Hello**  
**Alice**

**Hello,**  
**Alice**

|    |                                                                                                                                                                                                                                                                                           |       |       |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|
| 14 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; void countdown(int n) {     if (n &gt; 0) {         cout &lt;&lt; n &lt;&lt; " ";         countdown(n - 1);     } } int main() {     countdown(3);     return 0; }</pre> | 3 2 1 | 3 2 1 |
| 15 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; inline int square(int x) {     return x * x; } int main() {     cout &lt;&lt; square(5);     return 0; }</pre>                                                           | 25    | 25    |

16

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void displayMessage()
{ cout << "Function Pointer Example!";
}
int main() {
void (*funcPtr)()
= displayMessage;
funcPtr();
return 0;
}
```

**Function  
Pointer  
Example!**

**Function  
Pointer  
Example!**

|    |                                                                                                                                                                                                                                                 |    |    |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| 17 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     auto add = [](int a, int b) {         return a + b;     };     cout &lt;&lt; add(3, 4);     return 0; }</pre> | 7  | 7  |
| 18 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int arr[3] = {10, 20, 30};     cout &lt;&lt; arr[1];     return 0; }</pre>                                    | 20 | 20 |

19

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
int main() {
    int arr[2][3] = {{1, 2, 3}, {4, 5, 6}};
    cout << arr[1][2];
    return 0;
}
```

6

6

20

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void printArray(int arr[], int size) {
    for (int i = 0; i < size; i++) {
        cout << arr[i] << " ";
    }
}
int main() {
    int arr[3] = {1, 2, 3};
    printArray(arr, 3);
    return 0;
}
```

1 2 3

1 2 3

|    |                                                                                                                                                                                                                                                     |             |       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|
| 21 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     char str[] = "Hello";     cout &lt;&lt; str;     return 0; }</pre>                                                | Hello       | Hello |
| 22 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; #include &lt;string&gt; using namespace std; int main() {     string str = "C++ Programming";     cout &lt;&lt; str.substr(4, 5);     return 0; }</pre> | Programming | Prog  |

23

What will be the output of the following C++ program?

```
#include <iostream>
#include <cstring>
using namespace std;
int main() {
    char str1[] = "Hello";
    char str2[] = "World";
    strcat(str1, str2);
    cout << str1;
    return 0;
}
```

**Compilation error**

**HelloWorld**

24

What will be the output of the following C++ program?

```
#include <iostream>
#include <sstream>
using namespace std;
int main() {
    stringstream ss;
    ss << "C++" << " " << 2024;
    string result = ss.str();
    cout << result;
    return 0;
}
```

C++  
2024

C++  
2024

|    |                                                                                                                                                                                                                            |                          |           |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------|
| 25 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int num = 10;     int* ptr = &amp;num;     cout &lt;&lt; *ptr;     return 0; }</pre>     | <b>Compilation error</b> | <b>10</b> |
| 26 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int a = 20;     int* p = &amp;a;     *p = 30;     cout &lt;&lt; a;     return 0; }</pre> | <b>30</b>                | <b>30</b> |

|    |                                                                                                                                                                                                                                   |   |   |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|
| 27 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int arr[3] = {1, 2, 3};     int* ptr = arr;     cout &lt;&lt; *(ptr + 1);     return 0; }</pre> | 2 | 2 |
| 28 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int* ptr = new int(5);     cout &lt;&lt; *ptr;     delete ptr;     return 0; }</pre>            | 5 | 5 |

|    |                                                                                                                                                                                                                                                  |                                              |                                              |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|
| 29 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int* ptr = new int(10); // Memory leak, no delete     return 0; }</pre>                                        | <p>No output, but there is a memory leak</p> | <p>No output, but there is a memory leak</p> |
| 30 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; #include &lt;memory&gt; using namespace std; int main() {     unique_ptr&lt;int&gt; ptr(new int(100));     cout &lt;&lt; *ptr;     return 0; }</pre> | <p>Compilation Error</p>                     | <p>100</p>                                   |

31

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void displayMessage()
{ cout << "Hello from function pointer!";
}
int main() {
    void (*funcPtr)()
    = displayMessage;
    funcPtr();
    return 0;
}
```

**Hello  
from  
function  
pointer!**

**Hello  
from  
function  
pointer!**

32

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
int main() {
    const char* arr[] = {"Apple", "Banana", "Cherry"};
    cout << arr[1];
    return 0;
}
```

**Banana**

**Banana**

33

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
void display(int a) { cout << a << " "; }
int main() { void (*funcPtr)(int) = display; int arr[3] = {10, 20, 30}; for (int i = 0; i < 3; i++) { funcPtr(arr[i]); } return 0; }
```

10 20 30

10 20 30

|    |                                                                                                                                                                                                                                                               |    |    |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|
| 34 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; int main() {     int arr[3] = {1, 2, 3};     int* ptr = arr;     cout &lt;&lt; *(ptr + 2);     return 0; }</pre>                             | 3  | 3  |
| 35 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; class MyClass { public:     int x;     MyClass() { x = 10; } }; int main() {     MyClass obj;     cout &lt;&lt; obj.x;     return 0; }</pre> | 10 | 10 |

36

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
class Rectangle
{ public:
    int length, width;
    Rectangle(int l, int w) {
        length = l; width = w; }
    int main() {
        Rectangle rect(5, 10);
        cout << rect.length << " " << rect.width;
        return 0;
    }
}
```

5 10

5 10

|    |                                                                                                                                                                                                                                                                                                                                            |      |      |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|
| 37 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; class Circle { public: double radius; void setRadius(double r) { radius = r; } double getArea() { return 3.14 * radius * radius; } }; int main() { Circle c; c.setRadius(5); cout &lt;&lt; c.getArea(); return 0; }</pre> | 78.5 | 78.5 |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|

38

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
class Test {
public:
    Test() {
        cout << "Constructor called" << endl;
    }
    ~Test() {
        cout << "Destructor called" << endl;
    }
};
int main() {
    Test obj;
    return 0;
}
```

**Constructor called**  
**Destructor called**

**Constructor called**  
**Destructor called**

39

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
class MyClass
{ public:
  int value;
  MyClass()
  { value = 5; }
};
int main() {
  MyClass obj;
  cout << obj.value;
  return 0;
}
```

5

5

40

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
class Box {
public:
    int length;
    Box(int l) { length = l; }
};
int main() {
    Box b(10);
    cout << b.length;
    return 0;
}
```

10

10

|    |                                                                                                                                                                                                                                                                                                                                                               |                                         |                                         |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| 41 | <p>What will be the output of the following C++ program?</p> <pre>#include &lt;iostream&gt; using namespace std; class Animal { public: void sound() { cout &lt;&lt; "Animal Sound" &lt;&lt; endl; } }; class Dog : public Animal { public: void bark() { cout &lt;&lt; "Bark" &lt;&lt; endl; } }; int main() { Dog d; d.sound(); d.bark(); return 0; }</pre> | <p><b>Animal<br/>Sound<br/>Bark</b></p> | <p><b>Animal<br/>Sound<br/>Bark</b></p> |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|

42

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
class Complex {
public:
    int real, imag;
    Complex() : real(0), imag(0) {}
    Complex operator + (const Complex& c) {
        Complex temp;
        temp.real = real + c.real;
        temp.imag = imag + c.imag;
        return temp;
    }
    void display() {
        cout << real << " + i" << imag << endl;
    }
};
int main() {
    Complex c1, c2;
    c1.real = 5;
    c1.imag = 3;
    c2.real = 2;
    c2.imag = 4;
    Complex c3 = c1 + c2;
    c3.display();
    return 0;
}
```

7 + i7

7 + i7

43

What will be the output of the following C++ program?

```
#include <iostream>
using namespace std;
int main() {
    int a = 5,
        b = 10;
    cout << (a + b) * (a > b) << endl;
    return 0;
}
```

15

0

44

What will be the output of the following C++ program that checks for an out-of-bounds access on a 2D array?

```
#include <iostream>
using namespace std;
int main() {
    int arr[2][2] = {{1, 2}, {3, 4}};
    cout << arr[2][2] << endl;
    // Out of bounds
    return 0;
}
```

**Undefined behavior**

**Undefined behavior**

|    |                                                                                                                                                                                                                                                                                                                                                                                                                          |                    |                    |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|
| 45 | <p>What will be the output of the following C++ program that reverses each word in a string?</p> <pre>#include &lt;iostream&gt; #include &lt;sstream&gt; using namespace std; int main() {     string str = "hello world";     stringstream ss(str);     string word;     while (ss &gt;&gt; word)     {         reverse(word.begin(), word.end());         cout &lt;&lt; word &lt;&lt; " ";     }     return 0; }</pre> | <p>olleh dlrow</p> | <p>olleh dlrow</p> |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------|