

[Home](#) / [My courses](#) / [Structured Programming \[09-MAR-2022\]](#) / [Practise Exam](#) / [Mid Module Exam](#) / [Preview](#)

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Time taken 44 mins 33 secs

Marks 20.00/24.00

Grade 20.83 out of 25.00 (83%)

Question **1**

Correct

Mark 1.00 out of 1.00

Given the below C++ code snippet, determine if the code will compile successfully:

```
#include <iostream>
```

```
using namespace std;
```

```
void main(){
```

```
return 0;
```

```
}
```

Select one:

- ☒ a. The data type of the main function should be an integer type. ✓
- ☐ b. The code is fine as is.
- ☐ c. Another compiler would be able to compile the snippet.
- ☐ d. The code is invalid as the main function should be renamed to `_main`

Your answer is correct.

The correct answer is: The data type of the main function should be an integer type.

Question **2**

Correct

Mark 1.00 out of 1.00

With an understanding of comparison operators and for loops, does the script require modification to operate correctly?

```
float number;
for(int i = 0; i > 10; i++){
    cout << "Enter value between 1 and 10" << endl;
    cin >> number;
    cout <<"You entered " << number;
}
```

Select one:

- ☐ a. No.
- ☐ b. Yes. The loop will run however, will eventually stop at 10
- ☒ c. Yes. To correct the issue change the orientation of the greater than operator. ✓
- ☐ d. Yes. To correct the issue, remove the counter variable from the loop header.

Your answer is correct.

The correct answer is: Yes. To correct the issue change the orientation of the greater than operator.

Question **3**

Correct

Mark 1.00 out of 1.00

How many times will the outer do while loop execute as per the below snippet:

```
int value = 1;
int count = 0;
do{
    for(int index = 1; index < 100; index++){
        cout << "The index value is" << index;
        count++;
    }
}while(value == 0);
```

Select one:

- ☐ a. 10 times.
- ☐ b. 100 times.
- ☐ c. It will not execute as the terminating statement would not be met.
- ☒ d. Once. ✓

Your answer is correct.

The correct answer is: Once.

Question **4**

Correct

Mark 2.00 out of 2.00

What two statements are required to ensure the snippet below generates series of 100 random and unique values greater than 300?

```
#include <iostream>
//statement one goes here
using namespace std;

int main(){
//statement two goes here
for(int i = 0; i < 100; i++){
cout << rand() % 100 + 300 << endl;
}
return 0;
}
```

Select one:

- ☐ a. #include <ctime> and rand(time(NULL))
- ☐ b. #include <ctime> and srand(time(NULL))
- ☒ c. #include <ctime> and srand(time(NULL)) ✓
- ☐ d. #include <time> and random()

Your answer is correct.

The correct answer is: #include <ctime> and srand(time(NULL))

Question **5**

Incorrect

Mark 0.00 out of 2.00

Upon examination of the snippet below, how many times will the function calcAge be invoked?

```
bool isFive = 5;
int number = 0;
calcAge();
while(isFive == 5){
    calcAge();
    cin >> number;
    if(number == 5){
        isFive = number;
    }
}
```

Select one:

- ☐ a. Unable to determine how many times the function will be invoked.
- ☒ b. At least once ✗
- ☐ c. The function cannot be invoked.
- ☐ d. The while loop will run indefinitely, therefore the loop will be invoked indefinitely.

Your answer is incorrect.

The correct answer is: Unable to determine how many times the function will be invoked.

Question 6

Correct

Mark 2.00 out of 2.00

A modification is required to the snippet below to ensure the statement "Number is equal to 30" is printed.

```
int TRUE = 0;
switch(TRUE){
case 10: cout << "Number is 10"; break;
case 20: cout << "Number is 20"; break;
case 30:
case 40:
case 50: cout << "Number is greater than 30"; break;
default: cout << "Number invalid";
}
```

Select one:

- ☐ a. The fall through mechanism of the switch case prevents any modification of the snippet above
- ☐ b. Add the statement `cout << "Number is equal to 30"; break` above case 30.
- ☒ c. Add the statement `cout << "Number is equal to 30"; break;` at case 30. ✓
- ☐ d. Add the statement `cout << "Number is equal to 30"; break` at case 30.

Your answer is correct.

The correct answer is: Add the statement `cout << "Number is equal to 30"; break;` at case 30.

Question 7

Correct

Mark 1.00 out of 1.00

Choose the best C++ statement that creates the range of floating point numbers greater than 100.5 and less than 499.7.

Select one:

- ☐ a. `floatingPointValue > 100.5 & floatingPointValue < 499.7`
- ☒ b. `intValue > 100.5 && intValue < 499.7` ✓
- ☐ c. `floatingPointValue > 100.5 || floatingPointValue < 499.7`
- ☐ d. None of the responses are valid

Your answer is correct.

The correct answer is: `intValue > 100.5 && intValue < 499.7`

Question **8**

Correct

Mark 1.00 out of 1.00

What are the mandatory components required when declaring a function in C++?

Select one:

- ☐ a. Statements in the function's body, data type, function name and parameters
- ☒ b. None of the responses are valid ✓
- ☐ c. Statements in the function's body, data type and function name
- ☐ d. Statements in the function's body, void data type and function name.

Statements in the function's body, data type and function name

Your answer is correct.

The correct answer is: None of the responses are valid

Question **9**

Correct

Mark 1.00 out of 1.00

In a standard C++ program, how many functions are required?

Select one:

- ☐ a. 5
- ☐ b. 3
- ☒ c. None of the responses are valid ✓
- ☐ d. 2

Your answer is correct.

The correct answer is: None of the responses are valid

Question **10**

Correct

Mark 1.00 out of 1.00

All user defined functions must return a value.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **11**

Correct

Mark 1.00 out of 1.00

How many parameters are required for a function declared with the void keyword?

Select one:

- ☐ a. 2
- ☐ b. 1
- ☒ c. None of the responses are valid ✓
- ☐ d. 3

Your answer is correct.

The correct answer is: None of the responses are valid

Question **12**

Correct

Mark 1.00 out of 1.00

A specific header file containing functionality required to declare user defined functions must be included in all C++ programs.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **13**

Correct

Mark 1.00 out of 1.00

A variable was declared with the name charValue. The value contained in the variable is printed to the console using a cout statement. What value should be shown on the screen?

Select one:

- ☐ a. A floating point value
- ☐ b. An integer value
- ☒ c. Unsure. No data type was provided. ✓
- ☐ d. A character value

Your answer is correct.

The correct answer is: Unsure. No data type was provided.

Question 14

Correct

Mark 1.00 out of 1.00

If a variable is declared as `int _;` what could be the reason the program is not compiling?

Select one:

- ☒ a. The variable is fine as is. No error should be generated. ✓
- ☐ b. The variable has no initial value.
- ☐ c. The compiler is not valid.
- ☐ d. None of the responses are valid.

Your answer is correct.

The correct answer is: The variable is fine as is. No error should be generated.

Question 15

Correct

Mark 1.00 out of 1.00

A while loop containing more than one conditional statements in the head of the loop is considered an entry controlled loop.

Select one:

- ☐ a. False. This type of loop would be considered an exit controlled loop.
- ☐ b. False. An entry controlled loop must have a minimum of two conditional statements.
- ☒ c. False. The while loop may contain as many conditional statements as is possible. ✓
- ☐ d. False. An entry controlled loop has only one conditional statement.

Your answer is correct.

The correct answer is: False. The while loop may contain as many conditional statements as is possible.

Question 16

Incorrect

Mark 0.00 out of 1.00

Exit controlled loops must at least run once. What are the expected number of iterations after an exit controlled loop iterates at least once?

Select one:

- ☐ a. None. It operates similar to the for loop and iterates a given number of times.
- ☒ b. None. The loop must not exceed one iteration. ✗
- ☐ c. None of the responses are valid.
- ☐ d. None. Exit controlled loops will only execute more than once if and only if the user enters data to the script.

Your answer is incorrect.

The correct answer is: None of the responses are valid.

Question 17

Correct

Mark 1.00 out of 1.00

The statement $s \neq 100 \mid \mid s < 200$; sets up what of range of possible values?

Select one:

- ☒ a. Values less than 200 but excluding 100 ✓
- ☐ b. Values less than or equal to 200 but greater than 100
- ☐ c. No range can be set up using the or ($\mid \mid$) operator.
- ☐ d. Values less than 200 but greater than zero.

Your answer is correct.

The correct answer is: Values less than 200 but excluding 100

Question 18

Incorrect

Mark 0.00 out of 1.00

The primary difference between an exit and entry controlled loop is the number of iterations each loop will complete.

Select one:

- ☒ True ✗
- ☐ False

The correct answer is 'False'.

Question 19

Correct

Mark 1.00 out of 1.00

Reassigning the value of a variable is completed using the assignment ($=$) operator.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **20**

Correct

Mark 1.00 out of 1.00

Including the update and conditional statements in the header of the while loop ensures the loop completes the necessary iterations.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **21**

Correct

Mark 1.00 out of 1.00

Given the functions findAverage() and findSum(), which function will return a floating point result?

Select one:

- ☐ a. findAverage()
- ☒ b. None. No data type or function declaration was provided. ✓
- ☐ c. None. The functions were declared in another code snippet.
- ☐ d. None. Both functions cannot be invoked as is.

Your answer is correct.

The correct answer is: None. No data type or function declaration was provided.

◀ Required Reading (hidden)

Jump to...

Final Exam Content Guide (hidden) ►