Started on	Thursday, 15 October 2020, 5:25 PM
State	Finished
Completed on	Thursday, 15 October 2020, 5:41 PM
Time taken	16 mins 18 secs
Marks	13.50/15.00
Grade	**90.00** out of 100.00

Question 1

Correct

Mark 1.00 out of 1.00

Why functions in C are useful? Select the most appropriate.

Select all that apply:

- [ ] I don't know. cross out
- [ ] They are not useful at all. cross out
- [x] They help developers avoid duplicating code and increase code reuse. ✔ cross out
- [x] They help developers divide a program into smaller, more manageable chunks. ✔ cross out
- [ ] They always return something. cross out

Your answer is correct.

Click "Next page" to continue

The correct answers are: They help developers avoid duplicating code and increase code reuse., They help developers divide a program into smaller, more manageable chunks.

Question 2

Correct

Mark 1.00 out of 1.00

Will the following function definition compile successfully?

```
void foo(int a, int b) {
  a + b;
  return;
}
```

Select one:

- (•) True ✔ cross out
- ( ) False cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: True

Question 3

Correct

Mark 1.00 out of 1.00

What is the problem with the following function definition?

```
def returnsInteger(int a) {
  int b = a;
  if (b >= a) {
    return b;
  }
  else {
    return a;
  }
}
```

Select one:

- It never returns `b`. cross out
- It never returns `a`. cross out
- It does not compile. ✔ cross out
- It works fine, there is no problem. cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: It does not compile.

Question 4

Correct

Mark 1.00 out of 1.00

What is the return type of the following function?

```
int[2][2] fill_array(int a) {
  int arr[2][2] = {a, a, a, a};
  return arr;
}
```

Select one:

- int cross out
- int[2][2] cross out
- void cross out
- There is a syntax or runtime error in the function. ✔ cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: There is a syntax or runtime error in the function.

Question 5

Correct

Mark 1.00 out of 1.00

Is the following function definition correct?

```
void returnsInteger(int a) {
  int b = a + 10;
  if (b > 20) {
    return b;
  }
  else {
    return a;
  }
}
```

Select one:

- True cross out
- False ✔ cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: False

Question 6

Correct

Mark 1.00 out of 1.00

What is the conversion specifier for a long, signed integer?

Select one:

- `%lu` cross out
- `%ld` ✔ cross out
- `%d` cross out
- `%lu` cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: `%ld`

Question 7

Correct

Mark 1.00 out of 1.00

Suppose we have the following variables:

```
int x = 104;
unsigned int y = 105;
```

What will the expression `x - y > 0` evaluate to?

Select one:

- True ✔ cross out
- False cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: True

Question 8

Correct

Mark 1.00 out of 1.00

Which of the following floating point representations are equivalent to `10.0`?

Select all that apply:

- `10.` ✔ cross out
- `10e-0` ✔ cross out
- `1E1` ✔ cross out
- `9.99999` cross out
- `10.E-2` cross out
- `100.E-1` ✔ cross out
- `1000.E-1` cross out

Your answer is correct.

Click "Next page" to continue

The correct answers are: `10.`, `10e-0`, `1E1`, `100.E-1`

Question 9

Correct

Mark 1.00 out of 1.00

A `float` and `double` have the same maximum value. Only the precision is different between the two.

Select one:

- True cross out
- False ✔ cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: False

Question 10

Partially correct

Mark 0.50 out of 1.00

What are/is the disadvantages(s) of external (global) variables?

Select all that apply:

- [ ] These variables may change values of the local variables — cross out
- [ ] Function `main()` cannot always use global variables — cross out
- [ ] Hard to reuse functions in other programs because it depends on the external variables — cross out
- [x] Might be difficult to debug the program and identify a function that causes a problem ✔ — cross out

Your answer is partially correct.

Click "Next page" to continue

The correct answers are: Hard to reuse functions in other programs because it depends on the external variables, Might be difficult to debug the program and identify a function that causes a problem

Question 11

Correct

Mark 1.00 out of 1.00

What is the output of the following program?

```
#include <stdio.h>

int i = 3;

int f(int n) {
  return ++n;
}

int main() {
  f(i);
  printf("%d\n", i);
  return 0;
}
```

Select one:

- ( ) 2 — cross out
- (•) 3 ✔ — cross out
- ( ) 4 — cross out
- ( ) This program will not compile — cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: 3

Question 12

Correct

Mark 1.00 out of 1.00

Assuming it compiles successfully, what is the output of the following program?

```
int x = 9999;

void f(int x) {
  x = 1000;
}

void g() {
  x = 500;
}

void h(int z) {
  z = 1000;
}

int main() {
  f(x);
  x = 1;
  g();
  h(x);
  printf("%d", ++x);
  return 0;
}
```

Select one:

- 1001 cross out
- 2 cross out
- 10000 cross out
- 501 ✔ cross out
- 500 cross out
- 1000 cross out
- 9999 cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: 501

Question 13

Incorrect

Mark 0.00 out of 1.00

Assuming it compiles successfully, what is the output of the following program?

```
int x = 5;

void change(int x) {
  x = 15;
}

int main() {
  int x = 10;
  printf("%d", x);
  return 0;
}
```

Select one:

- 15 cross out
- 10 cross out
- 5 ✖ cross out

Your answer is incorrect.

Click "Next page" to continue

The correct answer is: 10

Question 14

Correct

Mark 1.00 out of 1.00

What is the output of the following program?

```
#include <stdio.h>

int x = 9999;
x += 1;

int main() {
  int x = 1000;
  printf("%d", x);
  return 0;
}
```

Select one:

- It will not compile ✔ cross out
- 1000 cross out
- 9999 cross out
- 10000 cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: It will not compile

Question 15

Correct

Mark 1.00 out of 1.00

What is the output of the following program?

```
int f(int n) {
  static int i;
  i += n;
  return i;
}

int main() {
  int i = 3;
  i += f(i);
  i += f(i);
  printf("%d\n", i);
  return 0;
}
```

Select one:

- 3 cross out
- 6 cross out
- 9 cross out
- 12 cross out
- 15 ✔ cross out
- 18 cross out

Your answer is correct.

Click "Next page" to continue

The correct answer is: 15

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