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1.1

Functions (1) topd



1.1.1 Functions: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 8top:

Consider a function is_greater() given below. Mark all option(s) which return1.

```
int is_greater(unsigned int x, unsigned int y)
{
   if(x-y > 0)
     return 1;
   else
     return 0;
}
```

Answer key √

1.2

Loop (1) topd

1.2.1 Loop: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 13top:



The statement

```
while ( --counter >= 1 )
counter % 2 ? printf("A") : printf("B");
```

can NOT be rewritten as

A.

```
while ( --counter >= 1 )
    if ( counter % 2 )
        printf("A");
    else
        printf("B");
```

В.

```
while ( counter >= 1 )
    if (counter % 2)
        printf("A");
    else
        printf("B");
--counter;
```

C.

```
while ( counter > 1 )
{
     --counter;
     if ( counter % 2 )
        printf("A");
     else
        printf("B");
}
```

D.

```
do {
     --counter;
     printf( counter % 2 ? "A" : "B" );
} while ( counter >= 2 );
```

goclasses2024_wq15 goclasses programming programming-in-c loop multiple-selects 2-marks

Answer key

1.3

Programming In C (9) top

1.3.1 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 1եօր

Which of the following(s) will evaluate to true

```
A. 0 \&\& 0 == 0
                                                                                       B. 0 \&\& 1 == 0
C. 1 \parallel 0 == 0
                                                                                      D. 1 || 1 == 0
goclasses2024_wq15 go<mark>classes</mark> programming programming-in-c multiple-selects 1-mark
```



1.3.2 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 11top

Let the variables x, y, and z, be of type int and assigned some values. The variable b1 is initialized as follows:



```
int b1 = (x > z) && (y >= z);
```

Variables b2, b3, b4, and b5 are initialized below.

```
int b2 = (x \le z) || (y < z)
int b3 = !((x < z) || (y <= z))
int b4 = !((x < z) && (y >= z))
int b5 = ((x > z) && (y > z)) || ((x > z) && (y == z))
```

Variables b2, b3, b4, and b5 ALWAYS, SOMETIMES, or NEVER takes the same value as b1. Which of the variable(s) SOMETIMES takes the same value as b1?

A. *b*2

B. *b*3

C. *b*4

D. b5

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1.3.3 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 15,0



Professor Greg wants to give assignments to his students to write a program for the XOR5 function. XOR5 is a function that returns true if and only if EXACTLY one of the integers A and B is 5. Using which of the following condition(s), XOR5 can be implemented?

```
A. (A == 5)! = (B == 5)
B. !(A == 5)! = !(B == 5)
C. (A == 5)?!(B == 5) : (B == 5)
D. ((A == 5)||(B == 5)) \&\& !((A == 5) \&\& (B == 5))
```

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1.3.4 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 200





```
#include <stdio.h>
int main()
  int i = 1
  for(i = 0; i<10; i+3)
  switch(i)
     case 3:
        printf("Hi. This is case 3");
        break;
     case 6:
        printf("Hi. This is case 6");
        break
        break;
     default:
        printf("Hi. This is default");
        break
  return 0;
```

A. Hi. This is case 3

C. Infinite Execution

B. Hi. This is case 6

D. Hi. This is default

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1.3.5 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 3.00

What will be the value printed by the following program?



```
int i = 10;
i = !i > 14;
printf("%d", i);
```

A. 10

B. 14

C. C

D. 1

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Answer key⊸

1.3.6 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 4_{op}

What will be the output?

```
int a = 4, b =15, c =29;

if(c>b>a)

printf("TRUE");

else

printf("FALSE");
```

A. TRUE

B. FALSE

C. Syntax Error

D. Compilation Error

goclasses2024_wq15 goclasses programming programming-in-c 1-mark

Answer key √

1.3.7 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 5 op



If x, y, z, and w are declared as integer variables, which of the following expressions are NOT valid in C?

A.
$$x+5=y+z$$

C. $x=(z-y)==w$

B.
$$x = y = z + w$$

goclasses2024_wq15 goclasses programming programming-in-c 1-mark

D. w = x! = y && z

1.3.8 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 6 op



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

Here?: is a ternary operator which is right to left-associative.



A. 10

B. 21

C. 11

D. 20

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Answer key √

1.3.9 Programming In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 7top



What is the value printed by the following program?



A. 0

B. 1

C. -1

D. 2

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Answer key√

1.4.1 Storage Classes In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 10օր

Consider the below program written into 2 files.



```
f1.c

#include <stdio.h>
extern int x;

void fun(){
   printf("%d", x);
}
```

```
#include <stdio.h>
static int x;
void fun();
main() {
   fun();
   printf("%d", x);
}
```

Note that compilation of f1.c and f2.c happens independently of each other.

Which of the following is TRUE?

- A. f1.c and f2.c can be compiled independently.
- B. f1.c will produce a compilation error since variable x does not get any memory, and we are using it in printf.
- C. f1.c and f2.c can be compiled and linked. The output of the program will be 00.
- D. f2c will produce a compilation error since function fun() is not defined in 2c.

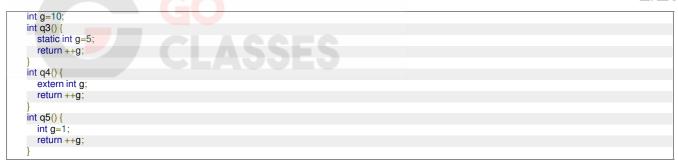
goclasses2024_wq15 goclasses programming programming-in-c storage-classes-in-c output 1-mark

Answer key

1.4.2 Storage Classes In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 1200



Consider the following variable and function definitions:



What is the value of the expression q3()+q3()+q4()+q4()+q5()+q5()?

A. 32

В. 34

C. 38

D. 40

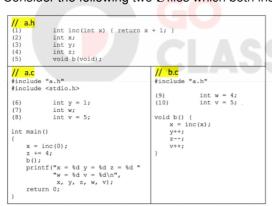
goclasses2024_wq15 goclasses programming programming-in-c functions storage-classes-in-c 2-marks

Answer key √

1.4.3 Storage Classes In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 14տր



Consider the following two c files which both include the same. h file:



When compiled, linked, and executed, the following output results:

```
x = 1 y = 2 z = 3 w = 4 v = 5
```

Assuming that this program compiled and linked successfully, and based on the output shown above, add static and/or extern modifiers to the blank lines (1) through (10).

Leave them blank if neither modifier would be appropriate.

For example, if we say line (2) is static then we consider line (2) as "static int x". Or if we say line (9) is empty then we treat line 9 as "int w=4".

```
B.
    Line(1) - empty
                                                                              Line(1) - static
    \operatorname{Line}(2) - static
                                                                              Line(2) - static
    Line(3) - empty
                                                                              Line(3) - extern
    Line(4) - extern
                                                                              Line(4) - empty
                                                                              Line(5) – extern
    Line(5) - empty
    Line(6) - empty
                                                                              Line(6) - empty
   Line(7) - empty
                                                                              Line(7) - extern
    Line(8) - static
                                                                              Line(8) - static
    Line(9) - empty
                                                                              Line(9) - empty
    Line(10) - static
                                                                              Line(10) - static
C.
                                                                          D.
   Line(1) – static
                                                                              Line(1) – empty
    Line(2) - static
                                                                              Line(2) - static
    Line(3) - empty
                                                                              Line(3) - empty
    Line(4) - empty
                                                                              Line(4) - empty
    Line(5) – empty
                                                                              Line(5) – extern
    Line(6) - empty
                                                                              Line(6) - empty
                                                                              Line(7) - empty
    Line(7) - empty
   Line(8) - static
                                                                              Line(8) - static
    Line(9) - empty
                                                                              Line(9) - empty
    Line(10) - static
                                                                              Line(10) - static
goclasses2024_wq15 goclasses
                       programming programming-in-c storage-classes-in-c
                                                               multiple-selects
Answer key<sup></sup> √
```

1.4.4 Storage Classes In C: GO Classes 2024 | Weekly Quiz 15 | Programming | Question: 9.00

As shown below, the file f.c defines a function f whose code refers to the variable x that is not a local variable or a parameter. The file g.c defines a function g whose code refers to the variable x that is not a local variable or a parameter.

```
// file f.c
// declaration for x

void f(int a){
...
x = ...
}
```

```
// file g.c
// declaration for x

void g(char* p){
...
    x = ...
}
```

The following table below shows how the variable x is defined in each file. For each row in the table, indicate in Column (c) whether the two functions at run-time refer to the SAME identifier (memory location) or to DIFFERENT identifiers (memory locations)

Column A	Column B	Column C
declaration in f.c	declaration in g.c	SAME or DIFFERENT
int x;	extern int x;	SAME
int x = 0;	static int x;	
static int x;	static int x;	
static int x;	$\text{extern int } \mathbf{x} = 0;$	

The first row of column C has been filled for hints. What will be in the 2nd, 3rd, and 4th row of Column C, respectively?

- A. SAME, DIFFERENT, DIFFERENT
- C. DIFFERENT, DIFFERENT
- B. SAME, SAME, SAME
- D. DIFFERENT, SAME, DIFFERENT

goclasses2024_wq15 goclasses programming programming-in-c storage-classes-in-c 1-mark

Answer key⊲

Answer Keys

1.1.1	A;B;C;D
1.3.4	С
1.3.9	Α

1.2.1	B;D
1.3.5	С
1.4.1	Α

1.3.1	C;D
1.3.6	В
1.4.2	D

1.3.2	B;C
1.3.7	Α
1.4.3	В

1.3.3	A;B;C;D
1.3.8	Α
1.4.4	С