

# EECS 10: Computational Methods in Electrical and Computer Engineering

## Quiz on Lectures 1-8

Rainer Dömer


doemer@uci.edu

The Henry Samueli School of Engineering  
Electrical Engineering and Computer Science  
University of California, Irvine

## Quiz: Question 1

- Today's computers run at which clock speed?
  - a) 10 kHz
  - b) 1 ms
  - c) 1 GHz
  - d) 100 km/h
  - e) 1 MHz

## Quiz: Question 1

- Today's computers run at which clock speed?
  - a) 10 kHz
  - b) 1 ms
  -  c) 1 GHz
  - d) 100 km/h
  - e) 1 MHz

EECS10: Computational Methods in ECE, Quiz 1-8

(c) 2005 R. Doemer

3

## Quiz: Question 2

- Which Unix command shows you the contents of the current directory?
  - a) `pwd`
  - b) `ls`
  - c) `dir`
  - d) `list`
  - e) `cd`

EECS10: Computational Methods in ECE, Quiz 1-8


(c) 2005 R. Doemer

4

## Quiz: Question 2

- Which Unix command shows you the contents of the current directory?

a) `pwd`

 b) `ls`

c) `dir`

d) `list`

e) `cd`

## Quiz: Question 3

- Which of the following Unix commands renames file “text1” into “homework1”?

a) `ren text1 homework1`

b) `mv text1 homework1`

c) `rm text1 homework1`

d) `rm homework1 text1`

e) `ren homework1 text1`

### Quiz: Question 3

- Which of the following Unix commands renames file “text1” into “homework1”?

a) `ren text1 homework1`

 b) `mv text1 homework1`

c) `rm text1 homework1`


d) `rm homework1 text1`

e) `ren homework1 text1`

### Quiz: Question 4

- What is C *not*?
  - a structured programming language
  - a compiled programming language
  - a high-level programming language
  - a portable programming language
  - a object-oriented programming language

## Quiz: Question 4

- What is C *not*?
  - a) a structured programming language
  - b) a compiled programming language
  - c) a high-level programming language
  - d) a portable programming language
  -  e) a object-oriented programming language

## Quiz: Question 5

- What is the meaning of the following code fragment?


```
/* printf("C programming is great!\n") */
```

- a) it prints "C programming is boring!"
- b) it is the main function of the C program
- c) it is a comment ignored by the compiler
- d) it prints "C programming is great!"
- e) it is a syntax error because a semicolon is missing after the `printf()` statement

## Quiz: Question 5

- What is the meaning of the following code fragment?

```
/* printf("C programming is great!\n") */
```

- a) it prints "C programming is boring!"
- b) it is the main function of the C program
-  c) it is a comment ignored by the compiler
- d) it prints "C programming is great!"
- e) it is a syntax error because a semicolon is missing after the `printf()` statement

## Quiz: Question 6

- What is *not* true about of the following compiler call?


```
% gcc -Wall -ansi HelloWorld.c -o HelloWorld
```

- a) the GNU C Compiler is called to generate an executable program called `HelloWorld`
- b) the compiler will print warning and/or error messages about any non-ANSI compliance in the code
- c) the compiler will read the file `HelloWorld.c`
- d) the compiler will ignore all warnings
- e) the compiler will assume that `HelloWorld.c` is an ANSI-compliant C program

## Quiz: Question 6

- What is *not* true about of the following compiler call?

```
% gcc -Wall -ansi HelloWorld.c -o HelloWorld
```

- a) the GNU C Compiler is called to generate an executable program called `HelloWorld`
- b) the compiler will print warning and/or error messages about any non-ANSI compliance in the code
- c) the compiler will read the file `HelloWorld.c`
-  d) the compiler will ignore all warnings
- e) the compiler will assume that `HelloWorld.c` is an ANSI-compliant C program

## Quiz: Question 7

- Which of the following constructs is a valid arithmetic operator in C?  
(Check all that apply!)

- a) \*
- b) .
- c) #
- d) >>
- e) -

## Quiz: Question 7

- Which of the following constructs is a valid arithmetic operator in C?  
(Check all that apply!)

- a) \*
- b) .
- c) #
- d) >>
- e) -

## Quiz: Question 8

- What is the value of an integer  $x$  after the following statement?

```
x = 8 / 2 + 10 % 3;
```


- a) 0
- b) 42
- c) -2
- d) 5
- e) 2



### Quiz: Question 8

- What is the value of an integer  $x$  after the following statement?

```
x = 8 / 2 + 10 % 3;
```

- a) 0
- b) 42
- c) -2
-  d) 5
- e) 2

### Quiz: Question 9

- What is the value of an integer  $x$  after the following statement?


```
x = (10 - (3 - (20 - -10)));
```

- a) -7
- b) 17
- c) 27
- d) 37
- e) 77

### Quiz: Question 9

- What is the value of an integer `x` after the following statement?

```
x = (10 - (3 - (20 - -10)));
```

- a) -7
- b) 17
- c) 27
-  d) 37
- e) 77


### Quiz: Question 10

- Which of the following format strings will print a `long int` value in decimal format when used with `printf()`?

- a) `"%d"`
- b) `'%ld'`
- c) `"%ld"`
- d) `'%li'`
- e) `"%lu"`

## Quiz: Question 10

- Which of the following format strings will print a `long int` value in decimal format when used with `printf()`?

- a) `"%d"`
- b) `'%ld'`
-  c) `"%ld"`
- d) `'%li'`
- e) `"%lu"`

## Quiz: Question 11

- What is the value of an integer `x` after the following statement?

```
x = 2 << 9 >> 2;
```

- a) 256
- b) **Syntax Error!**
- c) 292
- d) 512
- e) 2000000

## Quiz: Question 11

- What is the value of an integer  $x$  after the following statement?

```
x = 2 << 9 >> 2;
```

- a) 256
- b) Syntax Error!
- c) 292
- d) 512
- e) 20000000

## Quiz: Question 12

- Which of the following constants is of type **double**?  
(Check all that apply!)

- a) 42
- b) 4.2
- c) 4e2
- d) 4E2
- e) 42f

## Quiz: Question 12

- Which of the following constants is of type **double**?  
(Check all that apply!)

a) 42

b) 4.2

c) 4e2

d) 4E2

e) 42f

## Quiz: Question 13

- What is the result type of the following expression?

```
1 - 23 * (4.5 / 67L) - (short)89
```

a) **short int**

b) **int**

c) **long int**


d) **float**

e) **double**

### Quiz: Question 13

- What is the result type of the following expression?

```
1 - 23 * (4.5 / 67L) - (short)89
```

- a) `short int`
- b) `int`
- c) `long int`
- d) `float`
-  e) `double`

### Quiz: Question 14

- What is the value of `x` after the following code segment?


```
int    i = 10;  
double d = 0.5;  
long   x;  
  
x = i/3.0 + d;
```

- a) 3.333333
- b) 3
- c) 3.833333
- d) 0.333333
- e) 3.5

## Quiz: Question 14

- What is the value of **x** after the following code segment?

```
int    i = 10;  
double d = 0.5;  
long   x;  
  
x = i/3.0 + d;
```

- a) 3.333333
-  b) 3
- c) 3.833333
- d) 0.333333
- e) 3.5

## Quiz: Question 15

- Which of the following constructs are valid type names in C? (Check all that apply!)
- a) `char int`
  - b) `unsigned float`
  - c) `short integer`
  - d) `signed long long int`
  - e) `long double`

## Quiz: Question 15

- Which of the following constructs are valid type names in C? (Check all that apply!)

a) `char int`

b) `unsigned float`

c) `short integer`

d) `signed long long int`

e) `long double`

## Quiz: Question 16

- Assume `Int` is a variable of type `int` and `Double` is a variable of type `double`. Which statement is true for the following assignment? (Check all that apply!)

```
Int = (int)Double;
```

a) The assignment is invalid: syntax error!

b) The parentheses should go around `Double`.

c) The precision of `Int` is doubled.

d) The value in `Double` is converted to an integer value and then assigned to `Int`.

e) Any fractional part in `Double` is truncated off.



## Quiz: Question 16

- Assume `Int` is a variable of type `int` and `Double` is a variable of type `double`. Which statement is true for the following assignment? (Check all that apply!)

```
Int = (int)Double;
```

- a) The assignment is invalid: syntax error!
- b) The parentheses should go around `Double`.
- c) The precision of `Int` is doubled.
- d) The value in `Double` is converted to an integer value and then assigned to `Int`.
- e) Any fractional part in `Double` is truncated off.

EECS10: Computational Methods in ECE, Quiz 1-8

(c) 2005 R. Doemer

33

## Quiz: Question 17

- Which of the following expressions correctly computes the polynomial  $p = 2x^2 - 3x + 5$ ? (Check all that apply!)

- a)  $p = 2x^2 - 3x + 5;$
- b)  $p = (2*x - 3)*x + 2 + 3;$
- c)  $p = 2/x - 5 * (3*x);$
- d)  $p = 2*(x*x + 3)*x + 5;$
- e)  $p = x*2*x + 5.0 - 3*x;$

EECS10: Computational Methods in ECE, Quiz 1-8

(c) 2005 R. Doemer

34

### Quiz: Question 17

- Which of the following expressions correctly computes the polynomial  $p = 2x^2 - 3x + 5$  ?  
(Check all that apply!)

a) `p = 2x^2 - 3x + 5;`

b) `p = (2*x - 3)*x + 2 + 3;`

c) `p = 2/x - 5 * (3*x);`

d) `p = 2*(x*x + 3)*x + 5;`

e) `p = x*2*x + 5.0 - 3*x;`

### Quiz: Question 18

- Which of the following names are valid keywords in C? (Check all that apply!)

a) `if`

b) `when`

c) `case`

d) `integer`

e) `short`

## Quiz: Question 18

- Which of the following names are valid keywords in C? (Check all that apply!)

- a) `if`
- b) `when`
- c) `case`
- d) `integer`
- e) `short`

## Quiz: Question 19

- Which of the following names are valid identifiers in C? (Check all that apply!)

- a) `I1`
- b) `i1`
- c) `if`
- d) `Cool_New_Name`
- e) `2fast4you`

## Quiz: Question 19

- Which of the following names are valid identifiers in C? (Check all that apply!)

- a) `I1`
- b) `i1`
- c) `if`
- d) `Cool_New_Name`
- e) `2fast4you`

## Quiz: Question 20

- What is the result of the evaluation of the following expression?


```
1 == 2 || 3 < 4 && 5 > -6
```

- a) `true`
- b) `false`
- c) `1`
- d) `0`
- e) `boolean`

## Quiz: Question 20

- What is the result of the evaluation of the following expression?

```
1 == 2 || 3 < 4 && 5 > -6
```

- a) true
- b) false
-  c) 1
- d) 0
- e) boolean

## Quiz: Question 21

- What is the result of the evaluation of the following expression?


```
33 < 33 ? 33 : 3 - 3
```

- a) 33
- b) -33
- c) 1
- d) 0
- e) 6

## Quiz: Question 21

- What is the result of the evaluation of the following expression?

```
33 < 33 ? 33 : 3 - 3
```

- a) 33
- b) -33
- c) 1
-  d) 0
- e) 6

## Quiz: Question 22

- If integer  $x = 2$  at the beginning, what is the value of  $x$  after the following statement?


```
x += x + 1;
```

- a) 1
- b) 2
- c) 3
- d) 4
- e) 5

## Quiz: Question 22

- If integer  $x = 2$  at the beginning, what is the value of  $x$  after the following statement?

```
x += x + 1;
```

- a) 1
- b) 2
- c) 3
- d) 4
-  e) 5

## Quiz: Question 23

- Assuming that  $x$  is a variable of type `int`, which values of  $x$  satisfy the following condition?


```
x % 2 == 1
```

- a) no value
- b) any value
- c) any value between 1 and 2
- d) any odd value
- e) any even value

## Quiz: Question 23

- Assuming that  $x$  is a variable of type `int`, which values of  $x$  satisfy the following condition?

```
x % 2 == 1
```

- a) no value
- b) any value
- c) any value between 1 and 2
-  d) any odd value
- e) any even value

## Quiz: Question 24

- Given the following program fragment, what is printed when it gets executed?


- a) nothing
- b) 2
- c) 20
- d) 30
- e) **syntax error**

```
int i = 0;
int s = 0;
while (1)
{
    i++;
    if (i >= 10)
        { break; }
    if (i % 2 == 1)
        { continue; }
    s += i;
}
printf("%d", s);
```



## Quiz: Question 24

- Given the following program fragment, what is printed when it gets executed?

- a) nothing
- b) 2
-  c) **20**
- d) 30
- e) `syntax error`

```
int i = 0;
int s = 0;
while (1)
{
    i++;
    if (i >= 10)
    {
        break;
    }
    if (i % 2 == 1)
    {
        continue;
    }
    s += i;
}
printf("%d", s);
```