

EECS 10: Computational Methods in Electrical and Computer Engineering

Quiz on Lectures 1-8

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Quiz: Question 1

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

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

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3

Quiz: Question 2

- Which of the following Unix commands renames file “text1” into “homework1”?
 - a) `ren text1 homework1`
 - b) `ren homework1 text1`
 - c) `mv text1 homework1`
 - d) `rm text1 homework1`
 - e) `mv homework1 text1`


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4

Quiz: Question 2


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

- a) `ren text1 homework1`
- b) `ren homework1 text1`
-  c) `mv text1 homework1`
- d) `rm text1 homework1`
- e) `mv homework1 text1`

Quiz: Question 3

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

Quiz: Question 3

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

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7

Quiz: Question 4

- What is the meaning of the following code fragment?

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

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

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8

Quiz: Question 4

- What is the meaning of the following code fragment?

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

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

Quiz: Question 5

- What is true about of the following compiler call? (Check all that apply!)

```
% 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 ignore all warnings
- d) the compiler will read the file `HelloWorld.c`
- e) the compiler will overwrite the `HelloWorld` file if it already exists

Quiz: Question 5

- What is true about of the following compiler call? (Check all that apply!)

```
% 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 ignore all warnings
- d) the compiler will read the file `HelloWorld.c`
- e) the compiler will overwrite the `HelloWorld` file if it already exists

Quiz: Question 6

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

- a) `*`
- b) `%`
- c) `!`
- d) `#`
- e) `>>`

Quiz: Question 6

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

- a) *
- b) %
- c) !
- d) #
- e) >>

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13

Quiz: Question 7

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

```
x = 11 / 3 + 11 % 3;
```

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

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14

Quiz: Question 7

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

```
x = 11 / 3 + 11 % 3;
```

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

Quiz: Question 8

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


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

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

Quiz: Question 8

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

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

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

Quiz: Question 9

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

- a) `"%ud"`
- b) `"%d"`
- c) `"%lu"`
- d) `"%ui"`
- e) `"%u"`

Quiz: Question 9

- Which of the following format strings will print an **unsigned int** value in decimal format when used with **printf()** ?
 - a) `"%ud"`
 - b) `"%d"`
 - c) `"%lu"`
 - d) `"%ui"`
 - e) `"%u"`

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19

Quiz: Question 10

- Which of the following statements will correctly read a decimal value from **stdin** into a variable **x** of type **signed int** ?
 - a) `stdin("%x", &u);`
 - b) `stdin("%u", x);`
 - c) `scanf("&x", %u);`
 - d) `scanf("%d", &x);`
 - e) `scanf("&x", %d);`

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20


Quiz: Question 10

- Which of the following statements will correctly read a decimal value from `stdin` into a variable `x` of type `signed int`?

a) `stdin("%x", &u);`

b) `stdin("%u", x);`

c) `scanf("&x", %u);`

 d) `scanf("%d", &x);`

e) `scanf("&x", %d);`

Quiz: Question 11

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

```
x = 3 << 2 >> 1;
```

a) **Syntax Error!**

b) 321

c) 3

d) 6

e) 12

Quiz: Question 11

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

```
x = 3 << 2 >> 1;
```

- a) `Syntax Error!`
- b) `321`
- c) `3`
- d) `6`
- e) `12`

Quiz: Question 12

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

- a) `42`
- b) `.42`
- 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) .42 c) 4e2 d) 4E2

e) 42f

Quiz: Question 13

- What is the result type of the following expression?


```
-1 + 2.3f * (4.5 / 67f) - (char)89
```

a) **char**b) **int**c) **long int**d) **float**e) **double**

Quiz: Question 13

- What is the result type of the following expression?

```
-1 + 2.3f * (4.5 / 67f) - (char)89
```

- a) char
- 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;  
double x;  
  
x = i/3 + d;
```


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

Quiz: Question 14

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

```
int    i = 10;
double d = 0.5;
double x;

x = i/3 + d;
```

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

Quiz: Question 15

- Given the following code fragment,

```
double x;
double y;

x = (int)(y + 0.5);
```

which of the following statements is true?
(Check all that apply!)

- a) for **y=2.0**, **x** is set to 2.0
- b) for **y=2.1**, **x** is set to 2.0
- c) for **y=2.49**, **x** is set to 2.0
- d) for **y=2.5**, **x** is set to 3.0
- e) for **y=2.99**, **x** is set to 3.0

Quiz: Question 15

- Given the following code fragment,

```
double x;  
double y;  
  
x = (int)(y + 0.5);
```


which of the following statements is true?
(Check all that apply!)

- a) for $y=2.0$, x is set to 2.0
- b) for $y=2.1$, x is set to 2.0
- c) for $y=2.49$, x is set to 2.0
- d) for $y=2.5$, x is set to 3.0
- e) for $y=2.99$, x is set to 3.0

Quiz: Question 16

- Today's computers run at which clock speed?
 - a) 85 MPH
 - b) 1 kHz
 - c) 1 ms
 - d) 1 GHz
 - e) 1 MHz

Quiz: Question 16

- Today's computers run at which clock speed?
 - a) 85 MPH
 - b) 1 kHz
 - c) 1 ms
 -  d) 1 GHz
 - e) 1 MHz

Quiz: Question 17

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

Quiz: Question 17

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

a) `long char`

b) `signed long long`

c) `unsigned float`

d) `signed integer`

e) `long double`

Quiz: Question 18

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

```
i = (int)d;
```

- a) The comparison checks whether `d` is an integer.
- b) The precision of `i` is doubled.
- c) The parentheses should go around `d`.
- d) The value in `d` is converted to an integer value and then assigned to `i`.
- e) Any fractional part in `d` is truncated off.

Quiz: Question 18

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

```
i = (int)d;
```

- a) The comparison checks whether `d` is an integer.
- b) The precision of `i` is doubled.
- c) The parentheses should go around `d`.
- d) The value in `d` is converted to an integer value and then assigned to `i`.
- e) Any fractional part in `d` is truncated off.

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37

Quiz: Question 19

- Which of the following expressions correctly computes the polynomial $p = 2x^2 - 3x + 4$?
(Check all that apply!)

- a) `p = 2x^2 - 3x + 4;`
- b) `p = 2xx - 3x + 4;`
- c) `p = x*2*x - 3*x + 4.0;`
- d) `p = (2*x - 3)*x + 4;`
- e) `p = 2*(x*x + 3)*x + 4;`

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38

Quiz: Question 19

- Which of the following expressions correctly computes the polynomial $p = 2x^2 - 3x + 4$? (Check all that apply!)

a) `p = 2x^2 - 3x + 4;`

b) `p = 2xx - 3x + 4;`

c) `p = x*2*x - 3*x + 4.0;`

d) `p = (2*x - 3)*x + 4;`

e) `p = 2*(x*x + 3)*x + 4;`

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39

Quiz: Question 20

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

a) `if`

b) `repeat`

c) `void`

d) `main`

e) `Integer`

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40

Quiz: Question 20

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

- a) `if`
- b) `repeat`
- c) `void`
- d) `main`
- e) `Integer`

Quiz: Question 21

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

- a) `abc`
- b) `IBM`
- c) `new value`
- d) `My_Very_Nice_Variable_Name`
- e) `2fast4you`

Quiz: Question 21

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

- a) `abc`
- b) `IBM`
- c) `new value`
- d) `My_Very_Nice_Variable_Name`
- e) `2fast4you`

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43

Quiz: Question 22

- 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) `123456`

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44

Quiz: Question 22

- 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) `123456`

Quiz: Question 23

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

```
17 < 15 ? 17 : 42
```

- a) `17`
- b) `42`
- c) `15`
- d) `true`
- e) `false`

Quiz: Question 23

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

```
17 < 15 ? 17 : 42
```

- a) 17
-  b) **42**
- c) 15
- d) true
- e) false

Quiz: Question 24

- For integer $x = 1$ at the beginning, what is the value of x after the following statement?


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

- a) 0
- b) 1
- c) 2
- d) 3
- e) 4

Quiz: Question 24

- For integer $x = 1$ at the beginning, what is the value of x after the following statement?

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

- a) 0
- b) 1
- c) 2
-  d) 3
- e) 4

Quiz: Question 25

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


```
x % 2 == 0
```

- a) no value
- b) any value
- c) any value less than 2
- d) any even value
- e) any odd value

Quiz: Question 25

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

```
x % 2 == 0
```

- a) no value
- b) any value
- c) any value less than 2
-  d) any even value
- e) any odd value

Quiz: Question 26

- Assume that x is an integer in the range of 1 through 10 inclusively. Which of the following expressions can be used as a test for x being an even number?

(Check all that apply! 2 pts.)

- a) `x % 2 == 0`
- b) `x / 2 > 1`
- c) `x % 2 == 1`
- d) `x / 2 * 2 == x`
- e) `x==2 || x==4 || x==6 || x==8 || x==10`

Quiz: Question 26

- Assume that x is an integer in the range of 1 through 10 inclusively. Which of the following expressions can be used as a test for x being an even number?

(Check all that apply! 2 pts.)

- a) $x \% 2 == 0$
- b) $x / 2 > 1$
- c) $x \% 2 == 1$
- d) $x / 2 * 2 == x$
- e) $x==2 \ || \ x==4 \ || \ x==6 \ || \ x==8 \ || \ x==10$

Quiz: Question 27

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

- a) nothing
- b) 0
- c) 10
- d) 20
- e) 30

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

Quiz: Question 27

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

- a) nothing
- b) 0
- c) 10
- d) 20
- e) 30

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

Quiz: Question 28

- Which of the following variable declarations is valid in ANSI-C?
(Check all that apply! 2 pts.)

- a) `double xyz;`
- b) `double x, y, z;`
- c) `double x = 1.0;`
- d) `double x = 1.1, y = 2.2, z = 3.3;`
- e) `double x,y,z = 1.0,2.0,3.0;`

Quiz: Question 28

- Which of the following variable declarations is valid in ANSI-C?

(Check all that apply! 2 pts.)


- a) `double xyz;`
- b) `double x, y, z;`
- c) `double x = 1.0;`
- d) `double x = 1.1, y = 2.2, z = 3.3;`
- e) `double x,y,z = 1.0,2.0,3.0;`

Quiz: Question 29

- Which of the following data types has the largest range of representable numbers?

- a) `char`
- b) `short int`
- c) `long long`
- d) `unsigned int`
- e) `signed long int`

Quiz: Question 29

- Which of the following data types has the largest range of representable numbers?
 - a) `char`
 - b) `short int`
 -  c) `long long`
 - d) `unsigned int`
 - e) `signed long int`

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59

Quiz: Question 30


- Which of the following data types can store the greatest value?
 - a) `long int`
 - b) `float`
 - c) `double`
 - d) `long long int`
 - e) `unsigned long long int`

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60

Quiz: Question 30

- Which of the following data types can store the greatest value?
 - a) `long int`
 - b) `float`
 -  c) **`double`**
 - d) `long long int`
 - e) `unsigned long long int`