

EECS 10: Computational Methods in Electrical and Computer Engineering

Quiz on Lectures 9-18

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Quiz: Question 1

- What is output by the following C statement?


```
printf("20%d + 30%d", 02, 03);
```

- a) 2002 + 2003
- b) 20% + 30%
- c) 5005
- d) 202 + 303
- e) 20%d + 30%d, 02, 03

Quiz: Question 1

- What is output by the following C statement?

```
printf("20%d + 30%d", 02, 03);
```

- a) 2002 + 2003
- b) 20% + 30%
- c) 5005
-  d) 202 + 303
- e) 20%d + 30%d, 02, 03

Quiz: Question 2

- 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 odd number?

(Check all that apply!)

- a) $x \% 2$
- b) $x / 2 * 2 == x$
- c) $x \% 2 == 1$
- d) $x==1 \ || \ x==3 \ || \ x==5 \ || \ x==7 \ || \ x==9$
- e) $x \% 2 == 0$

Quiz: Question 2

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(Check all that apply!)

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- e) $x \% 2 == 0$

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5

Quiz: Question 3

- What needs to be changed in the program below in order to have **B** printed when 85 is entered?

- a) Change line 8 to `printf("B");`
- b) Delete line 7
- c) Change line 7 to `if (x == 85)`

```

1 int x;
2 scanf("%d", &x);
3 if (x > 90)
4   { printf("A"); }
5 if (x > 80)
6   { printf("B"); }
7 if (x > 70)
8   { printf("C"); }

```

- d) Change line 5 to `if (x > 80 && x <= 90)`
- e) Change line 7 to `if (x > 70 && x <= 80)`

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6

Quiz: Question 3


- What needs to be changed in the program below in order to have **B** printed when **85** is entered?

a) Change line 8 to
`printf("B");`

b) Delete line 7

c) Change line 7 to
`if (x == 85)`

d) Change line 5 to
`if (x > 80 && x <= 90)`

 e) Change line 7 to
`if (x > 70 && x <= 80)`

```

1 int x;
2 scanf("%d", &x);
3 if (x > 90)
4   { printf("A"); }
5 if (x > 80)
6   { printf("B"); }
7 if (x > 70)
8   { printf("C"); }

```

Quiz: Question 4

- Which of the following expressions would be treated as a true condition when used with an `if` statement?

(Check all that apply!)

a) `(int)5.5 > 5`

b) `1 || 0 && 0`

c) `5 == 5`

d) `(1 + 2 + 3) == (3 << 2 >> 1)`

e) `5 - 5`

Quiz: Question 4

- Which of the following expressions would be treated as a true condition when used with an `if` statement?
(Check all that apply!)

a) `(int)5.5 > 5`

b) `1 || 0 && 0`

c) `5 == 5`

d) `(1 + 2 + 3) == (3 << 2 >> 1)`

e) `5 - 5`

Quiz: Question 5

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

a) `short`

b) `continue`

c) `printf`

d) `return`

e) `Break`

Quiz: Question 5

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

- a) `short`
- b) `continue`
- c) `printf`
- d) `return`
- e) `Break`

Quiz: Question 6

- If `cnt` is an integer counter, how could one update the value of `cnt`? (Check all that apply!)

- a) `cnt += 1;`
- b) `++cnt;`
- c) `cnt++;`
- d) `cnt += cnt;`
- e) `cnt = cnt + 1;`

Quiz: Question 6

- If `cnt` is an integer counter, how could one update the value of `cnt`?
(Check all that apply!)

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- c) `cnt++;`
- d) `cnt += cnt;`
- e) `cnt = cnt + 1;`

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13

Quiz: Question 7

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

```
int x = 0;
for(x = 1; x <= 10; x++)
{ }
```

- a) 0
- b) 1
- c) 9
- d) 10
- e) 11

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
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14

Quiz: Question 7

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for(x = 1; x <= 10; x++)
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```

- a) 0
- b) 1
- c) 9
- d) 10
-  e) 11

Quiz: Question 8

- What is the value of x after the following code fragment is executed?


```
int x = 0;
do { x++;
    } while(x < 10);
```

- a) 0
- b) 1
- c) 9
- d) 10
- e) 11

Quiz: Question 8

- What is the value of x after the following code fragment is executed?

```
int x = 0;
do { x++;
    } while(x < 10);
```

- a) 0
- b) 1
- c) 9
-  d) 10
- e) 11

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17

Quiz: Question 9

- What is the value of x after the following code fragment is executed?

```
int x = 10;
while(x >= 0)
{ x -= 2;
}
```

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

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18

Quiz: Question 9

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```
int x = 10;
while(x >= 0)
{ x -= 2;
}
```

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

Quiz: Question 10


- Given the following function g , what is the result of $g(85)$?

- a) 'A'
- b) 'B'
- c) 'C'
- d) 'D'
- e) 'F'

```
char g(int n)
{
    switch(n/10)
    { case 10:
      case 9: return('A');
      case 8: return('B');
      case 7: return('C');
      case 6: return('D');
      default: return('F');
    }
}
```

Quiz: Question 10

- Given the following function `g`, what is the result of `g(85)`?

- a) 'A'
-  b) 'B'
- c) 'C'
- d) 'D'
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      default: return('F');
    }
}
```

Quiz: Question 11

- What is output by the following C statement?


```
printf("x = %05d.", 3 + 4);
```

- a) `x = 3 + 4`
- b) `x = 007`
- c) `x = 00007`
- d) `x = 7`
- e) `x = -7`

Quiz: Question 11

- What is output by the following C statement?

```
printf("x = %05d.", 3 + 4);
```


- a) `x = 3 + 4`
- b) `x = 007`
-  c) `x = 00007`
- d) `x = 7`
- e) `x = -7`

Quiz: Question 12

- In the `gdb` debugger, what does `next` do?

- a) It moves to the next argument of the function.
- b) It executes the next statement in the program.
- c) It calls the next function in the program.
- d) It prints the value of the next variable.
- e) It loads the next program into the debugger.

Quiz: Question 12

- In the `gdb` debugger, what does `next` do?
 - a) It moves to the next argument of the function.
 -  b) It executes the next statement in the program.
 - c) It calls the next function in the program.
 - d) It prints the value of the next variable.
 - e) It loads the next program into the debugger.

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25

Quiz: Question 13

- Given the following code fragment, which of the following statements are true?
(Check all that apply!)

- a) Function `g` calls function `f`
- b) Variable `z` is a local variable of function `g`
- c) Function `f` is declared, but not defined.
- d) Function `g` is declared and defined.
- e) `y` is a parameter of function `g`.

```
void f(int i);
void g(int x, int y)
{
    int z;

    z = f(x) + 2*y;
    return z;
}
```

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26

Quiz: Question 13

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(Check all that apply!)

```
void f(int i);
void g(int x, int y)
{
    int z;

    z = f(x) + 2*y;
    return z;
}
```

- a) Function `g` calls function `f`
- b) Variable `z` is a local variable of function `g`
- c) Function `f` is declared, but not defined.
- d) Function `g` is declared and defined.
- e) `y` is a parameter of function `g`.

Quiz: Question 14

- Given that the C standard math library is included, which of the following equations results in the value 3.0?
(Check all that apply!)

- a) `pow(9.0, .5)`
- b) `cos(0) * 3.0`
- c) `sin(0) * 3.0`
- d) `log10(1000)`
- e) `sqrt(9.0)`

Quiz: Question 14

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(Check all that apply!)

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- b) `cos(0) * 3.0`
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- d) `log10(1000)`
- e) `sqrt(9.0)`

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29

Quiz: Question 15

- Given the following program fragment, what is the value of `g(2, f(3, 4))`?

- a) 9
- b) 12
- c) 14
- d) 15
- e) 18

```
int x = 5;

int f(int x, int y)
{
    return x + y;
}

int g(int x, int y)
{
    return f(x, y);
}
```

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30

Quiz: Question 15

- Given the following program fragment, what is the value of $g(2, f(3, 4))$?

- a) 9
- b) 12
- c) 14
- d) 15
- e) 18

```
int x = 5;

int f(int x, int y)
{
    return x + y;
}

int g(int x, int y)
{
    return f(x, y);
}
```

Quiz: Question 16

- What is output by the following program fragment?

- a) 2 EECS00
- b) E ECS
- c) EE
- d) EECS10
- e) C EECS


```
char s[] = "EECS10";

s[4] = 0;
printf("%c %s", s[2], s);
```


Quiz: Question 16

- What is output by the following program fragment?

```
char s[] = "EECS10";  
s[4] = 0;  
printf("%c %s", s[2], s);
```

- a) 2 EECS00
- b) E ECS
- c) EE
- d) EECS10
-  e) **C EECS**