YO, IS THIS GOING TO BE ON THE TEST?
- STUDENT

DEAR STUDENT:
IT MAY OR MAY NOT BE ON THE TEST, BUT IT WILL BE APPLICABLE TO YOUR FUTURE CAREER, FOR WHICH THERE IS NO TEST.
WHEN YOU GET PAID TO DO A JOB, THEY EXPECT YOU TO KNOW THIS STUFF!
- YOUR INSTRUCTOR

YOU NEVER KNOW WHEN IT'S GOING TO COME IN HANDY.
STUDY FOR LIFE, NOT JUST FOR THIS TEST.

UH, IS THAT A "YES" OR A "NO"?
IT'S A "YO."

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Study Sessions

• Monday, 6-7:30 pm, WNGR 116 (70 people out of 100 possible)
• Tuesday, 6-7:30 pm, WNGR 116 (80 people out of 100 possible)
Week 1: Variables and Basics

• A variable that can hold a whole number is called a(n) ____________.  
• A digit that can hold a zero or a one is known as a _____________.  
• Errors in a program can be classified into three types, list them  
  • A mistake that is a direct violation of the syntax rules will generate a compiler ____________.  
  • int myValue; is called a _____________________________.
Week 1 Continued

• A memory address is
  a) Where a variable is stored
  b) Where the computer is located
  c) A step in the program.
  d) Where the CPU is stored.

• What does the following line of code display to the screen?
  a) cout << “This is the computer\n programming book\n”;
  b) This is the computer programming book
  c) This is the computer
  d) Nothing
  e) This is the computer programming book
Week 1 Continued

• `cout << “How many items would you want?\n”`;
  a) is an output statement
  b) is an input statement
  c) is a variable declaration
  d) is a program

• `#include <iostream>`
  a) is a variable declaration
  b) an executable statement
  c) an include directive
  d) illegal code
Week 1 Continued

• What is wrong with the following statement?
  cout "Hello to everyone\n"
  a) cout should be count
  b) missing a semicolon
  c) missing a “
  d) missing a (

• True or False: The compiler will catch all your programming mistakes.
Week 1 Continued

• What is the output of the following code?

```cpp
float value;
value = 33.5;
cout << "value" << endl;
```

   a) 33.5
   b) 33
   c) value
   d) garbage
Week 1 Continued

• What is the value of x after the following statements?
  
  ```
  float x;
  x = 15/4;
  ```

  a) 3.75
  b) 4.0
  c) 3.0
  d) 60
• if-else statements that are inside other if-else statements are said to be _______________.

• When must we use braces to define the body of a conditional expression? ______________

• In a compound logical and (&&) expression, the evaluation of the expression stops once one of the terms of the expression is false. This is known as ______________ evaluation.

• The code following the __________ case is executed if none of the other cases are matched in a switch statement.
Week 2 Continued

• Given the following code fragment and the input value of 4.0, what output is generated?

```cpp
float tax;
float total;
cout << "enter the cost of the item\n";
cin >> total;
if ( total >= 3.0 ) {
   tax = 0.10;
   cout << total + (total * tax) << endl;
} else {
   cout << total << endl;
}
```

a) 3
b) 3.3
c) 4.0
d) 4.4
Week 2 Continued

• If x has the value of 3, y has the value of -2, and w is 10, is the
  following condition true or false?

  if( x < 2 && w < y)
  a) true
  b) false

• What is the correct way to write the condition y < x < z?

  a) (y < x < z)
  b) ( (y < x) && z)
  c) ((y > x) || (y < z))
  d) ((y < x) && (x < z))
Week 2 Continued

• Given the following code fragment, and an input value of 3, what is the output that is generated?

```cpp
int x;
cout << "Enter a value\n";
cin >> x;
if (x == 0) {
    cout << "x is zero\n";
} else {
    cout << "x is not zero\n";
}
```

a) x is zero
b) x is not zero
c) unable to determine
d) x is 3
Week 2 Continued

• Given the following code fragment, what is the output?
  
  ```
  int x=5;
  if( x > 5)
      cout << "x is bigger than 5. ";
      cout <<"That is all. ";
      cout << "Goodbye\n";
  ```

  a) x is bigger than 5. That is all
  b) x is bigger than 5
  c) That is all. Goodbye
  d) Goodbye
• Which of the following are valid case statements in a switch?
  a) case 1:
  b) case x<4:
  c) case 'ab':
  d) case 1.5:
Week 3: Loops

• True or False: The body of a do-while loop always executes at least once.
• True or False: Loops are used when we need our program to make a choice between two or more things.
• Each repetition of a loop body is called ____________.
• A loop that iterates one too many or one too few times is said to be ___________.
Week 3 Continued

• Given the following code fragment, what is the final value of y?

```java
int x, y;
x = -1;
y = 0;
while(x <= 3) {
    y += 2;
    x += 1;
}
```

a) 2  
b) 10  
c) 6  
d) 8
• What is the final value of x after the following fragment of code executes?

```java
int x=0;
do {
    x++;
} while(x > 0);
```
a) 8  
b) 9  
c) 10  
d) 11  
e) infinite loop.
• Given the following code, what is the final value of i?

```cpp
int i;
for(i=0; i<=4;i++) {
    cout << i << endl;
}
```

a) 3  
b) 4  
c) 5  
d) 0
• Given the following code, what is the final value of $i$?

```c
int i,j;
for(i=0;i<4;i++) {
    for(j=0;j<3;j++) {
        if(i==2)
            break;
    }
}
```

a) 3  

b) 4  

c) 5  

d) 0
Week 3 Continued

• Which of the following is not a good reason for choosing a certain loop control?
  a) What the loop does
  b) The minimum number of iterations of the loop
  c) The condition for ending the loop
  d) If the loop is in a function
Week 3 Continued

• What is wrong with the following for loop?
  for(int i=0;i<10;i--) {
    cout << "Hello\n";
  }
  a) can not use a for-loop for this
  b) i is not initialized
  c) infinite loop
  d) off-by-one error
Week 4: Functions

• Variables defined inside a set of braces are said to be _______ to that block of code.
• True or False: A function may return more than one item.
• True or False: Function naming rules follow variable naming rules.
• True or False: The types of parameters are optional in the function declaration.
• True or False: It is possible to have a function that has no parameters.
• True or False: The parameters listed in the function declaration are considered global variables.
• True or False: pow(2,3) is the same as pow(3,2).
In the following function declaration, the variable size is known as a
__________________.

    int myFunction ( int size);

• The ______________ describes how the function will work.
• The __________ of a variable is where that variable can be used.
Week 4 Continued

• What is the value returned by the following function?
  ```
  int function() {
    int value = 35;
    return value + 5;
    value += 10;
  }
  ```
  a) 35  
  b) 40  
  c) 50  
  d) 10
• When overloading a function, what must be true?
  a) The names should be different with the same number and/or types of parameters.
  b) The names should be the same with different number and/or types of parameters.
  c) The names should be different with different number and/or types of parameters.
  d) The names should be the same with the same number and/or types of parameters.
Week 4 Continued

• Which of the following are valid function calls to the fabs function?
  a)  \texttt{fabs(3.5)};
  b)  \texttt{\texttt{cout} \ll \texttt{fabs(3.5)}};
  c)  \texttt{\texttt{cin} \gg \texttt{fabs(3.5)}};
  d)  \texttt{\texttt{fabs(cin} \gg x)};
  e)  a,b and c
  f)  a and b
Week 4 Continued

• Multiple arguments to a function are separated by
  a) comments
  b) semicolons
  c) colons
  d) commas
  e) periods
• What is the value of i after the following function call?
  int doSomething(int value) {
    value = 35;
    return value;
    value = 13
  }
  //fragment of main program
  int i=0;
  cout << doSomething(i);
  a) 13
  b) 35
  c) 48
  d) 0