Name: Mohammad Loraiz   Homework 4

1. What syntax follows the case statement?
A. :
B. ;
C. -
D. A newline

2. What keyword is required to avoid falling through from one case to the next?
A. end;
B. break;
C. stop;
D. quit;

3. What keyword covers unhandled case possibilities?
A. all
B. contingency
C. default
D. other

4. What is the result of the following code?
```
int x = 1;
switch(x)
{
  case 1: printf( "Help" );
  case 0: printf( "Me" );
          break;
  case 2: printf( "Hello World" );
}
```
A. HelpMe
B. Help
C. Help Me
D. Hello World

5. What is the final value of x after the code statements below are run?
```
int x;
for(x=0; x<10; x++)
{code statements}
```
A. 10
B. 9
C. 0
D. 1

6. When will the code block below execute?
```
while(x<100)
{code block}
```
A. When x is less than one hundred
B. When x is greater than one hundred
C. When x is equal to one hundred
D. Always

7. Which is not a loop structure?
A. for
B. do-while
C. while
D. repeat-until

. How many times is a do-while loop guaranteed to loop?
A. 0
B. Infinitely
C. 1
D. Variable

9. Can case conditions use test conditions?
A. yes
B. no

10. What is wrong with this case statement -> case (x > 2):
A. cases can't have a test condition
B. cases must be capitalized
C. cases must use a ; and not a :

11. What is wrong with this case statement -> case 2:
A. cases must be capitalized
B. cases must use a ; and not a :
C. nothing

12. True or false, cases must use curly braces like other test condition statements
A. true
B. false

13. Which loop structure always uses a semicolon after the test condition?
A. for
B. do-while
C. while

14. Which for loop syntax is correct?
A. for {i=0, i<10, i++}
        {code block}
B. for (i=0; i<10; i++);
        {code block}
C. for (i=0; i<10; i++)
        {code block}

15. Which for loop will not execute?
A. for (i=0; i<5; i++)
B. for (i=5; i<=10; i++)
C. for (i=5; i==10; i++)

16. Does every loop structure require curly braces?
A. yes   ↳ Not required if single statement
B. no

17. Which do-while loop structure is correct?
A. do
{
   code block
} while (condition);
B. do
{
   code block
} while (condition)
C. do
{
   code block
} while (condition):

Analyze the code snippet below and write the statement(s) that are printed on the screen after a 'B' is inputted.

```c
char selection;
printf("Enter A, B, or C \n");
scanf("%c",&selection);
switch(selection)
{       case 'A' : printf("Rt = R1 + R2\n");
        case 'B' : printf("It = Vt / Rt\n");
        case 'C' : printf("Pt = Vt * It\n");
        default  : printf("That was not a correct selection!");
}
```

It = Vt/Rt

Pt = Vt * It

That was not a correct selection!

19   Analyze the two programs shown below and determine if both programs can be made to perform the same function of counting from 1 through 5. If so, what needs to be changed in each program? If not, why can't they be made to work the same?

```c
void main(void)
{
    int count;
    for(count = 1; count <= 5; count = count + 1);
    printf("Count = %d \n", count);
}
```

```c
void main(void)
{
    int count = 1;
    while(count <= 5)
    {
    printf("Count = %d\n", count);
    ++count;
    }
}
```

The second main function can already display the count as 1 through 5. The first main function can be changed to display the count from 1 through 5 by removing the semi-colon after the for statement and surrounding the print statement with curly braces, enabling the count to be printed from 1- 5.

Convert the following "if … else if … else" code snippet into a switch/case code snippet.

```
void main(void)
{
        char selection;
        printf("Use OHM's Law to solve for A = Voltage, B = Current, C = Resistance\n ");
        printf("Enter your selection (A, B, or C) => ");
        scanf("%c",&selection);
        if(selection == 'A')
                printf("V = I * R");
        else if(selection == 'B')
                printf("I = V / R");
        else if(selection == 'C')
                printf("R = V / I");
        else
                printf("That was not a proper selection.");
}
```

```
void main(void)
{
        char selection;
        printf("Use OHM's Law to solve for A=Voltage, B=Curent, C=Resistance \n");
        printf("Enter your selection (A, B, or C) =? ");
        scanf("%.c", &selection);
        switch (selection)
        {
        case 'A':
                printf("V=I*R");
                break;
        case 'B':
                printf("I=V/R");
                break;
        case 'C':
                printf("R=V/I");
                break;
        default:
                printf("That was not a proper selection.");
        }
}
```