

Programming and Problem Solving through C Language O Level / A Level

Chapter - 6 : Functions

Assignments

1. List out the advantage of functions in C.
2. Write a function to find second largest number form 1D array of n number.
3. What is the recursive function? List out their merits and demerits.
4. Write a C program to calculate factorial of a number using recursion.
5. Write a C Program using function to print equivalent binary number of decimal number input by keyboard.
6. Differentiate between the following:
 - (i) Function definition and function declaration.
 - (ii) Actual parameter and formal parameter.
7. What is difference between pass by value and pass by reference with example?
8. What is function? Explain uses of function. Also, explain declaration, function call and function definition with example.
9. Write a function which accepts an array of size n containing integer values and returns average of all values. Call the function from main program.
10. Write a program to input a set of numbers into an array. Pass the array to a function that finds and display the largest number.

Multiple Choice

Part A. Multiple Choice

1. Which of the following software translates source code into object code?
A) Compiler B) Interpreter C) Assembler D) None
2. Which of the following is the correct order of evaluation for the below expression?
 $z = x + y * z / 4 \% 2 - 1$
A) $* / \% + - =$ B) $= * / \% + -$ C) $/ * \% - + =$ D) $* \% / - + =$
3. Which of the following can be used as a variable name?
A) no of students B) char C) 7th D) myName
4. Which of the following cannot be used as identifiers?
A) Spaces B) Digits C) Underscores D) Letters

5. Identify the invalid character constant:

- A) '\n' B) '\$' C) '12' D) 'p'

6. Which of the following is not an iterative statement?

- A) switch B) while C) do while D) for

7. The output of following program would be

```
void main() {  
    printf(“%d%d”,sizeof(3.14f), sizeof(3.14l)); }
```

- A) 4,8,10 B) 8,4,10 C) 18,8,4 D) None of the above

8. Determine the order of evaluation of operations within the expression $A < B \&\& C \parallel D > A$

- A) $\&\&$, \parallel , $<$, $>$ B) $<$, $>$, $\&\&$, \parallel C) $>$, $<$, $\&\&$, \parallel D) $\&\&$, $<$, $>$, \parallel

9. Which one of the following is not a keyword in C language?

- A) main B) endl C) float D) switch

10. How many times below for loop will be executed?

```
#include<stdio.h>
```

```
int main() { int i=0; for(;;) printf(“%d”, i); return 0; }
```

- A) 0 times B) Infinite times C) 10 times D) 1 times

11. The result of a Relational operation is always

- A) either True or False B) is less than or is more than
C) is equal or less or more D) All of the above

12. How many times is a do while loop guaranteed to loop?

- A) 0 B) Infinitely C) 1 D) Variable

13. Identify the correct sequence of steps to run a program

- A) link, load, code, compile and execute B) code, compile, link, execute and load
C) code, compile, link, load and execute D) compile, code, link, load and execute

14. What will be the output of the following code segment?

```
int x = 24, y = 39, z = 45; z = x + y; y = z - y; x = z - y;  
printf(“\n%d %d %d”, x, y, z);
```

- A) 24 39 63 B) 39 24 63 C) 24 39 45 D) 39 24 45

15. What is the output of this expression?

```
void main { int a,b; a=5; b= ++a + ++a; printf(“%d %d”,a,b); }
```

- A) 7 10 B) 5 10 C) 7 12 D) 7 14

Part B. True and False

1. An algorithm is a graphical representation of the logic of a program.
2. Comma operator is used for separation.
3. While loop is post tested loop.
4. There is no difference between `^0'` and `'0'`.
- 5 All of the following are valid expressions in C. **`a = 2 + (b = 5);`** **`a = b = c = 5;`** **`a = 11 % 3;`**
6. float constant cannot be used as a case constant in a switch statement.
7. `for(; i<2; i++);` statement will result in compilation error.
8. Do...While loop is post tested loop.
9. A `printf` statement can be used to display output on different lines.
10. `#` is used to insert comments in the program.
11. It is necessary to have default case in a switch statement.
12. A `continue` statement must be enclosed in a loop.
13. `sizeof()` is a function used to determine the amount of memory occupied by a variable.
14. `While(1) { }` is a PreTest Statement.
15. `&&` is a Bitwise Operator.