

## Chapter: 11

## Decision Constructs

## Multiple Choice Questions

Q 1: Which programming structure executes program statements in order?

- ☐ (A) Relation    ☐ (B) Decision    ☒ (C) Sequence    ☐ (D) Repetition

Q 2: Another term for a computer making a decision is:

- ☐ (A) sequential    ☒ (B) Selection    ☐ (C) Repetition    ☐ (D) Iteration

Q 3: \_\_\_\_ structure are used to control the flow of execution in a program:

- ☐ (A) Data    ☐ (B) Program    ☐ (C) Input    ☒ (D) Control

Q 4: Which one is a control structure?

- ☐ (A) Selection    ☐ (B) Sequence    ☐ (C) Repetition    ☒ (D) All of these

Q 5: A \_\_\_\_ structure chooses which statement or a block of statements is to execute:

- ☒ (A) Selection    ☐ (B) Input / output    ☐ (C) Sequence    ☐ (D) Repetition

Q 6: \_\_\_\_ structures is a selection structure?

- ☐ (A) if    ☐ (B) if - else    ☐ (C) switch    ☒ (D) All of these

Q 7: A group of statements enclosed in opening and closing braces is called:

- ☐ (A) Group statement    ☐ (B) Program statement    ☒ (C) Compound statement    ☐ (D) All of above

Q 8: In if-statement, true is represented by:

- ☒ (A) 1    ☐ (B) 2    ☐ (C) 3    ☐ (D) 4

Q 9: In if-statement, false represented by:

- ☐ (A) 1    ☐ (B) 2    ☐ (C) 3    ☐ (D) 4

Q10: In if statement, normally true is represented by:

- ☒ (A) 1    ☐ (B) 2    ☐ (C) 3    ☐ (D) 4

Q11: Graphical representation of a program is called:

- ☒ (A) Flowchart    ☐ (B) Logical chart    ☐ (C) Binary chart    ☐ (D) Logical diagram

Q12: Which statement is used for making two way decisions?

- ☐ (A) if    ☐ (B) Nested if    ☐ (C) While    ☒ (D) if-else

Q13: Which expression can be used in if condition?

- ☐ (A) Relational    ☐ (B) Logical    ☐ (C) Arithmetic    ☒ (D) All of these

Q14: If statement inside the true block of another if statement is called:

- ☒ (A) Nested if statement    ☐ (B) Conditional operator  
☐ (C) Branched if statement    ☐ (D) Relational operator

Q15: In if-else if statement only \_\_\_\_ block (s) of statement is executed:

- ☒ (A) One    ☐ (B) Two    ☐ (C) Three    ☐ (D) More than three

Q16: How many logical operators are available in C language?

- ☐ (A) 2 ☒ (B) 3 ☐ (C) 4 ☐ (D) 5

Q17: The conditional operator is used as alternate to:

- ☐ (A) if ☒ (B) if - else ☐ (C) if - else if - else ☐ (D) switch

Q18: Term for conditional operator is:

- ☒ (A) Ternary ☐ (B) Binary ☐ (C) Byte ☐ (D) Iteration

Q19: Conditional operator takes:

- ☐ (A) One operand ☐ (B) Two operand ☒ (C) Three operand ☐ (D) Four operand

Q20: Which operator is called ternary operator?

- ☐ (A) If ☐ (B) ++ ☒ (C) ? ☐ (D) ( )

Q21: What will be the output of ( 7 > 8 ) ? printf ("ABC");printf("XYZ");

- ☐ (A) ABC ☒ (B) XYZ ☐ (C) ABCXYZ ☐ (D) All of these

Q22: If x = 2 and y = 3 , what will be the output of the expression ? x>y? x + y : x\*y;

- ☒ (A) 6 ☐ (B) 5 ☐ (C) 12 ☐ (D) 10

Q23: If a = 5 and b = 10 , what the output of the following expression ? a>b? a\*b: a+b;

- ☐ (A) 5 ☐ (B) 150 ☐ (C) 100 ☒ (D) 15

Q24: \_\_\_\_\_ is not decision making statement:

- ☐ (A) if ☒ (B) break ☐ (C) nested if ☐ (D) switch



**Q1: What is Control structure?**

Ans: A control structure is a statement used to control flow of execution in a program or function. Control structure is used to combine individual instructions into a single logical unit. This unit has one entry point and one exit point. Program logic is implemented with the help of control structures. Three kinds of control structures are used to control flow of execution of instructions. These are as follow:

- Sequence structure
- Selection structure
- Repetition structure

**Q2: What is meant by sequence structure?**

Ans: In sequence structure the instructions of program executes one after the other in the order in which are written. It is also called the default flow of a program. The program starts execution from the first instruction and all instructions are executed one by one in a sequence.

**Q3: What is meant by selection structure?**

Ans: In selection structure the instructions of the program are divided into two or more groups. Selected group of instructions are executed. This selection is done after evaluation of a certain condition.

**Q4: What is meant by repetition structure?**

Ans: Repetition structure is also called iteration structure or loop structure. It is used to execute a statement or set of statement repeatedly as long as the given condition remains true. This control structure is used to repeat same or similar work. There are three basic loop structures in C language. These are as follow:

- While loop Do-while loop
- For loop

**Q5: What is IF statement?**

Ans: "if" is a keyword in C language. "if" statement is the simplest form of selection structure. It is used to execute or skip a statement or a set of statements after testing a condition. The condition should be a logical or relational expression. After evaluation if the result of condition is true the statement or set of statements after "if" statement executes. If the result of the condition is false the statement or the set of statements after "if" statement are skipped. The general syntax of if statement is

if(condition) Statement;

It is also called formatted output function. It is a library function defined in stdio.h header file. The syntax of printf() function is as follow:  
printf("string");

**Q6: What is a compound statement?**

Ans: A set of statements enclosed in curly brackets is called compound statement. It is also called block of code.

**Q7: What is if-else statement?**

Ans: "if" statement is used to make a decision whether a particular task will be performed or not. If we want to make a two way decision if-else statement is used. After evaluation of condition one from two code blocks will be executed and the other will be skipped. We cannot execute or skip both code blocks. The general syntax of if-else statement is

if(condition) Statement;

else Statement;

**Q8: What is if-else-if statement?**

Ans: if-else-if statement is used to execute one compound statement from two of more statements. If there are more than two compound statement and we want to choose one from them if-else-if statement is used.

The general syntax of if-else-if statement is

**if(condition 1)**

**Statement 1;**

**else if(condition 2)**

**Statement 2;**

**else if(condition n)**

**Statement n;**

**else Default**

**statement;**

**Q9: What is a conditional operator?**

Ans: Conditional operator is used as an attribute of simple if-else statement. It is used to make two way decisions. The general syntax of conditional operator is

**(Condition)? Statement 1: Statement 2;**

Condition should be a logical or relation expression. After evaluation if the result of condition is true then statement 1 is executed. If result of condition is false then statement 2 is executed.

**Q10: What is switch statement?**

Ans: Switch statement is an alternative of if-else-if statement. It is also a conditional statement. It is used when we want to execute a block on statements from multiple blocks. The general syntax of switch statement is

```
Switch (expression) {  
    case constant-expression:  
        statement (s);  
  
    break;  
  
    case constant-expression:  
        statement (s);  
        break;  
    default:  
        statement(s);  
}
```

**Q11: What is nested if statement?**

Ans: The use of an "if" statement is used within another "if" statement is called nested if statement.

The general syntax of nested if statement is

```
If (Condition 1)  
{  
    If (Condition 2)  
    {  
        Statement;  
    }  
}
```

**Q12: What is break statement?**

Ans: Break is a keyword. It is the last statement in each case. It is used to transfer flow of control outside a code block. When break statement executes in switch statement the flow of control is transferred to the first instruction after switch block.