CHAPTER-9

Modular Programming in QBASIC Theory
(Questions with its Solutions)

Question Pattern:
Very Short : 1 Mark Type
Short Q/A : 2 Marks Type

❖Answer the following questions in short.

1.What is modular programming?

Ans: Modular programming is the process of subdividing a computer program into separate sub-programs such as sub procedure and function procedure so that it can be programmed and tested independently.

2.What is looping?

Ans: The looping can be defined as repeating the same process multiple times until a specific condition satisfies. It is also known as iteration.

3.Write any two advantages of modular programming.

Ans: Any two advantages of modular programming are:

a. Errors can be easily identified , as they are localized to subroutine or function.

b. Saves time during project development as we can create custom modules that can be reused in numerous programs.

4.Define main module.

Ans: The top-level module which is located at the top of a procedure and is the entry point of the modular programming. It is used to declare procedures, parameters and also to call the procedures.

5. What is sub routine / sub procedure?

Ans: A sub procedure is a block of statements that are placed with a pair of SUB/END SUB statements and can be called by its name using a CALL statement.

6.Which statement is used to call sub routine?

Ans: CALL statement is used to call sub routine.

7. What is function procedure?

Ans: A function procedure is a block of statements that are placed with a pair of FUNCTION /END FUNCTION and returns a value whenever it is called. It performs a specific task and to return a value we must set a variable with the same name as the function.

8.What is the purpose of DECLARE statement?

Ans: DECLARE statement is used to declare a FUNCTION or SUB procedure and invokes argument data type checking.

9. What is global variable?

Ans: A variable in main module which can be accessed from any modules or procedure of a program is called global variable.

10. What are the statements to declare global variables?

Ans: Variables can be made global declaring them with **DIM SHARED or COMMON SHARED or SHARED** attributes.

11. What is a procedure? What are the two kinds of procedures in QBASIC?

Ans: A small, logical and manageable part of the program is known as procedure. Procedures divide the program into easily managed parts. They are of two kinds: SUB procedures and FUNCTION procedures.

12. What is parameter?

Ans: The variables enclosed in the parentheses (*brackets*) of the procedure which accept constants or variables passed to them from the calling module are known as parameters.

13. Write the types of parameters.

Ans: There are two types of parameters they are:

a. Formal Parameters
b. Actual/Real Parameters

14. What is an argument?

Ans: An argument represents the value that is passed to a procedure when we call the procedure.

15. Write the difference between sub-procedure and function procedure.

Ans: The difference between sub procedure and function procedure are:

Sub Procedure	Function Procedure
1. A sub procedure is a block of statements that are placed with a pair of SUB/END SUB statements and can be called by its name using a CALL statement.	1. A function procedure is a block of statements that are placed with a pair of FUNCTION /END FUNCTION and returns a value whenever it is called.
2. It does not return any value.	2. It returns a single value.
3. It does not have a data type.	3. It has a data type which is the return value of the function.

16. What do you mean by passing arguments by value and passing arguments by reference?

Ans: Passing arguments by value means that when we call a subroutine or function and pass a variable as an argument, a copy of the variable's value is passed to the subroutine or function. Any changes made to the parameter within the subroutine or function will not affect the original variable in the calling code.

Example: Sum ((x)) ***; argument name must be enclosed within double parentheses.***

Passing arguments by reference means that when we call a subroutine or function and pass a variable as an argument, we are actually passing a reference to the variable's memory location rather than a copy of its value. This allows the subroutine or function to directly modify the original variable's value.

Example: Sum (x) ***; argument name must be enclosed within a single parentheses.***

17. Define library function.

Ans: A library function refers to a predefined function that is provided by the QBASIC runtime environment or external libraries. These functions are ready-made and can be called from the QBASIC program to perform specific tasks without having to rewrite the functionality by yourself.