12 MARKS QUESTIONS [LONG]

UNIT – I

1. Explain the Generations of a Computer.
2. Explain various types or classifications of a computer.
3. What is Memory? Explain various Memory Devices (or) Memory Hierarchy (or) Types of Memories.
4. What is Computer? Explain the features (characteristics) and Limitations of a computer.
5. Briefly explain the Elements (Components) of a computer system (or) Block Diagram of a Computer (or) Logical organization of a digital computer (or) Anatomy of a Computer.
6. Explain the various input and output devices.
7. Explain various Secondary Storage Devices.
8. What is Software? Explain different types of software.
9. Explain various generations or classifications of programming languages.
10. Briefly explain the logical phases of a compiler model.
11. Discuss in detail the steps involved in developing a program.
12. Explain the steps involved in Software Development.
13. Define Algorithm. Explain the steps for algorithm development with an example.
14. What are the different ways of stating algorithms?
15. Define Flow-chart. Explain guidelines, advantages and limitations of using flow charts.
16. Explain the structure (or) various parts of a C-Program.
17. What is a Data Type? Explain different data types in detail.
18. What is an Operator? Explain different operators in C with suitable examples.
19. Discuss in detail about Expressions, Associativity and their Precedence.
20. What is Type Casting? Explain about different Type Conversions in details.

UNIT – II

1. Explain about various Formatted and Un-formatted I/O functions in detail.
2. Explain about different Control Structures in detail.
3. Explain about if-statement in detail with suitable examples and flow charts.
4. Explain about Switch statement in detail with suitable example and flow charts.
5. Briefly explain the looping statements (or) iterative statements with syntax and flow charts.
6. Explain about while in detail with suitable example.
7. Explain about for loop in detail with suitable example.
8. What is an Array? Explain about different types of arrays.
9. Write about one dimensional arrays in detail with suitable example.
10. Write a program to find the largest and smallest element in an array.
11. Write about multi-dimensional arrays (or) two dimensional arrays in detail with suitable example.
12. Write a program to demonstrate addition and subtraction of a matrix.
13. Write a program on matrix multiplication.
14. What are Character Arrays (or) Strings in C? Explain different String handling functions with syntax and examples.
15. Discuss the functions of ctype.h.

UNIT – III

1. What is a Function? Explain the need and elements of functions.
2. Explain about different Parameter Techniques (Call by Value & Call by Reference) with suitable examples.
3. Explain about passing of one-dimensional array to a function with example program.
4. Explain about passing of multi-dimensional array to a function with example program.
5. What are the different storage classes in C? Explain their usage with suitable examples.
6. What is Recursion? Explain about Recursive Functions with suitable program.
7. What is a Pointer? Explain the process of declaring and initializing pointers with example.

8. Explain in detail about the pointer arrays with example.
9. Discuss briefly about Dynamic Memory Allocation (or) Dynamic Memory Management with suitable examples.
10. Explain Command-line arguments with example

UNIT – IV

1. What is a Structure? Explain how structures are created (declaration, initialization and accessing) in C with example.
2. What is a Union? Explain how Unions are created (declaration, initialization and accessing) in C with example.
3. Explain about Array of Structures with an example program.
4. Explain about Array of Unions with an example program.
5. Explain about Enumerated data type with example program.
6. What is a File in C? Explain how to use Files (or) File operations.
7. Explain functions used to work with text files for reading and writing text. (File Input and Output Functions).
8. Write a program to count the number of characters in a given text file.
9. Discuss in detail about files of records.
10. What are the functions used for random access to files of records.

4 MARKS QUESTIONS [SHORT]

UNIT – I

1. Explain the general structure of a C program
2. Explain different types of program statements in C
3. Algorithm
4. Data types
5. Tokens
6. Conditional (or Ternary) Operator with example
7. Relational Operators
8. Bitwise Operators
9. Constants
10. Type casting (or conversion)
11. RAM and ROM
12. Functions of OS
13. History of C
14. Comments

UNIT – II

1. Flow-chart
2. Breas Continue
3. What is an Array? Explain with example
4. Un-sized Array
5. Character I/O Functions
6. Formatted I/O Functions
7. Escape Sequences
8. Write a c program to find greatest of two numbers using if-else statement
9. Do-while vs While loop

UNIT – III

1. Write a short note on Functions
2. Call by value vs. Call by reference
3. Write a short note on Global vs. Local Variables
4. Inline Function
5. Recursion
6. Elements of function
7. Return statement
8. Scope & Life-time
9. Dynamic Memory Allocation
10. malloc() vs. calloc()
11. What is Memory Leak?

UNIT – IV

1. Structure vs. Union
2. Write a short note on Enumeration
3. Explain various modes to open a file
4. Functions used for random access the file
5. File input functions
6. File output functions