

- Note : 1) All questions are Compulsory**
2) Numbers to the right indicate marks

Q.1. Attempt any Three of the following (15M)

- Explain the different types of programming language.
- Describe the structure of a c program
- What are the various data types in C? Explain them.
- Explain all operators in detail.
- What are constants in C? Discuss various types of constants used in C.
- What are the rules for declaring identifier? Which of the following are valid identifier.
(name, roll no, labc, add1, it, marks)

Q.2. Attempt any Three of the following (15M)

- Describe the five arithmetic operators in c.
- Explain the getchar() & putchar() functions used in C programming language.
- Explain the purpose and use of following operators with suitable examples.
 - `==` and `=`
 - Conditional operator (`? :`)
- Write a program to print following output
1
12
123
- Solve following expression.
`int i=8, j=5`
`float x=0.005, y=0.001`
 - $2 * (i/5) + (4 * (j-3)) \% (i+j-2)$
 - $((i*j) / (x+y)) \% 2$
- Explain gets () & puts () functions.

Q.3. Attempt any Three of the following (15M)

- Explain `if_else` statement with an example.
- What are the difference between entry control loop and exit control loop?
- Explain call by value and call by Reference.
- What is a function? Explain the purpose of function. Prototype, function, call, and function definition in c.
- Write a program in C to find maximum number among 3 Numbers.
- Write a program in C to find the factorial of a number using recursion.

Q.4. Attempt any Three of the following

(15M)

- a) Write a short note on Global variable.
- b) What are preprocessor directives in C? Explain # define in C.
- c) Explain 2D Array with example & Advantages of Array.
- d) Explain use of string function write program for strip () & strcat ()
- e) Write a program in C to accept 10 array elements & number. And check number is present in array or not.
- f) Write a program in C to accept string from user & calculate length of a string.

Q.5. Attempt any Three of the following

(15M)

- a) Explain Union in detail
- b) What is this pointer? Explain it.
- c) Difference between Array & Structure.
- d) Explain Nested Structure.
- e) How to create array of structure.
- f) Define employee structure with emp-no, name, Address, salary.
