

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT
(An Autonomous College U/s UGC Act 1956)

IMSc-IT SEMESTER-I, SEMESTER END EXAMINATION – SUMMER-2025

Subject Code: 1BS104**Date: 09-06-2025****Subject Name: INTRODUCTION TO PROGRAMMING****Time: 11:00AM TO 1:30PM****Total Marks: 70****Instructions**

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Write answers of **Section A** and **Section B** in **separate answer books**.
3. Attempt all questions from both **Section A** and **Section B**.
4. Each section carries **35 marks**, with a total of **70 marks** for the examination.
5. The figures to the right of each question indicate full marks, make suitable assumptions with justification.
6. BL - Bloom's Taxonomy Levels (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

SECTION A**Marks BL CO****Q.1 Multiple-Choice Questions****[05]****(a)** What is the correct way to declare an array of integers in C?**1 U 3****(i)** int arr[10];**(ii)** int arr(10);**(iii)** int arr;**(iv)** array int arr[10];**(b)** What is the default return type of a function in C if not specified?**1 U 4****(i)** void**(ii)** int**(iii)** float**(iv)** char**(c)** What does the function strlen("C Programming") return?**1 A 3****(i)** 12**(ii)** 13**(iii)** 14**(iv)** 15**(d)** What is the main difference between a struct and a union in C**1 R 5****(i)** Structures use more memory**(ii)** Unions allow only one member to be accessed at a time**(iii)** Unions use less memory since all members share the same memory**(iv)** All of the above

(e) What is a pointer in C? **1 R 5**

(i) A variable that stores a string (ii) A function

(iii) A variable that stores the address of another variable (iv) A structure

Q.2 Attempt Any Two [10]

(a) Explain One Dimensional Array with example. **5 R 3**

(b) Define string? Explain any 5 built-in string functions with example. **5 U 3**

(c) Write a C program to reverse a string using string function. **5 A 3**

Q.3 Attempt Any Two [10]

(a) What is function? Explain user-defined function. **5 U 4**

(b) State the difference between actual arguments and formal arguments. **5 R 4**

(c) Create a function to print addition, subtraction, multiplication, division arithmetic operation of two inputted numbers. **5 A 4**

Q.4 Attempt Any Two [10]

(a) Distinguish structure and union **5 R 5**

(b) Explain array of pointer with suitable example. **5 U 5**

(c) WAP to print the following information of an employee using structure.
Employee Details:Employee ID,Employee Name,Employee Address
Employee Salary **5 A 5**

SECTION B

	Marks	BL	CO
Q.5 Multiple-Choice Questions	[05]		
(a) What will continue do inside a loop?	1	U	2
(i) Restart the loop			(ii) Exit the loop
(iii) Skip the rest of the loop and start the next iteration			(iv) Pause the loop
(b) Which component converts source code into object code in C programming?	1	U	1
(i) Linker			(ii) Interpreter
(iii) Assembler			(iv) Compiler
(c) Which symbol is used to denote a preprocessor directive in C?	1	R	1
(i) @			(ii) %
(iii) #			(iv) \$
(d) Which function is used to write data into a file in C?	1	A	5
(i) read()			(ii) fwrite()
(iii) printf()			(iv) putchar()
(e) Which of the following is not a type of programming language level?	1	R	1
(i) Machine level			(ii) Intermediate level
(iii) Assembly level			(iv) High level
Q.6 Attempt Any Two	[10]		
(a) Explain the use of if...else, switch, and goto statements in control flow.	5	U	2
(b) Describe different types of loop structures in C with syntax and examples.	5	U	2
(c) Explain operator precedence and Associativity in C with a sample expression.	5	A	1
Q.7 Attempt Any Two	[10]		
(a) Compare the roles of Editor, Compiler, and Interpreter in C programming.	5	N	1
(b) Discuss various modes of opening a file in C using fopen().	5	U	5
(c) What are tokens in C? Explain with suitable examples.	5	U	1

Q.8 Attempt Any Two**[10]**

(a) Write a program to copy contents from one file to another using C.

5 A 5

(b) Write an algorithm to check whether a number is prime or not.

5 A 1

(c) Write a program to calculate the factorial of a number using a loop.

5 A 2
