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

ONLINE MCA SEMESTER-I, SEMESTER END EXAMINATION – WINTER 2025

SUBJECT CODE:1MCA101	**DATE: 19-01-2026**
SUBJECT NAME: PROGRAMMING WITH C	
TIME: 09:00 AM to 11:00 AM	**TOTAL MARKS: 50**

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 **25 marks**, with a total of **50 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	**(a)**	What is constant in C. List its types with examples.	05	R	1
Q.2		**Attempt Any Two**	**[10]**		
	(a)	Define an array? Explain the features and advantages of using arrays in C.	05	U	2
	(b)	How is memory allocated for a one-dimensional array?	05	U	2
	(c)	Explain any three string built-in functions.	05	U	2
Q.3		**Attempt Any Two**	**[10]**		
	(a)	What is meant by Call by Value and Call by Reference? Explain with a suitable example.	05	U	3
	(b)	Define recursion. Write a C program to find the factorial of a number using a recursive function.	05	U	3
	(c)	Explain nested functions with an example.	05	U	3

SECTION B

			Marks	BL	CO
Q.4	**(a)**	Explain different types of loop used in C programming.	**05**	**R**	**1**
Q.5		**Attempt Any Two**	**[10]**		
	(a)	What are nested structures? Explain their use with an example.	**05**	**U**	**4**
	(b)	Write a C program to define a structure Student and read, store, and display details of one student.	**05**	**A**	**4**
	(c)	What is pointer variable? Explain how variables are accessed using pointer.	**05**	**U**	**4**
Q.6		**Attempt Any Two**	**[10]**		
	(a)	Differentiate between calloc() and malloc() functions in C.	**05**	**U**	**5**
	(b)	What is dynamic memory allocation? Explain its advantages over static memory allocation.	**05**	**U**	**5**
	(c)	Explain different file opening modes used in C for text files.	**05**	**U**	**5**

✱✱✱✱✱✱✱✱✱✱