GUJARAT TECHNOLOGICAL UNIVERSITY
MCA – SEMESTER – I • EXAMINATION – SUMMER 2018

Subject Code: 2610001   **Date: 19-May-2018**

Subject Name: Fundamentals of Programming

Time: 02.30 pm to 5.00 pm   **Total Marks: 70**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1	**(a)**	i) Define function in C.	**02**
		ii) What is "break" keyword?	**02**
		iii) Define Algorithm.	**01**
		iv) What is the difference between local and global variable declaration in C.	**01**
		v) Explain atoi( ) function.	**01**
	(b)	i) How can we declare two dimensional arrays in C? What is an array pointer?	**03**
		ii) What does it mean by actual arguments and formal arguments? What is the scope of formal arguments?	**04**
Q.2	**(a)**	Which are the control structures available in C Language? Explain any one with example.	**07**
	(b)	What does it mean by Unary operator and Binary operator? Explain at least 5 different unary operators used in C.	**07**
		OR	
	(b)	i) List down any three C Compilers. "C is the Middle Level Language". Justify this statement.	**04**
		ii) What is the requirement of Algorithm?	**03**
Q.3	**(a)**	Write a program to count consonant characters from a given string.	**07**
	(b)	What is the general form of do-while statement, while statement and for loop statement with example?	**07**
		OR	
Q.3	**(a)**	What does storage class tell us? What are the types of storage class?	**07**
	(b)	Define structure? What is the purpose to declare a structure? Explain with code.	**07**
Q.4	**(a)**	What is recursive function? Explain it in brief. Write a recursive function to find factorial of given number.	**07**
	(b)	List and explain all the functions to write and read data to and from file.	**07**
		OR	
Q.4	**(a)**	Differentiate between macro and function with the help of suitable example.	**07**
	(b)	What is Linked List? How it is differ from array? Write a program to add node at last in the linked list.	**07**
Q.5	**(a)**	Write a program for insertion of a new node before a specified node in a Linked List.	**07**
	(b)	Write a program to check whether a string is palindrome or not.	**07**
		OR	
Q.5	**(a)**	How files can be managed in C? Explain three necessary functions to access a file randomly?	**07**
	(b)	How to pass one dimensional array and two dimensional array as arguments in a function? – explain each with suitable example.	**07**

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