Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA - SEMESTER–I • EXAMINATION – SUMMER 2013

Subject Code: 2610001 **Date: 04-06-2013**

Subject Name: Fundamentals of Programming

Time: 10:30am to 13:00pm **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)	Do as directed		07
		1	Define Array	
		2	What do you mean by lower level language?	
		3	Differentiate between getch( ) and getche( )	
		4	What is pointer?	
		5	What is the importance of using main( ) function in a program?	
		6	Define Algorithm	
		7	Explain atoi( ) function.	
	(b)	1	Discuss advantages of a Linked list over Array.	03
		2	List all the steps to process a .C program. Specify which files are created between the process of preparing a .C program and its execution.	02
		3	List all Bitwise operators. Explain Exclusive-OR operator.	02
Q.2	(a)	What does it mean by Unary operator and Binary operator? Explain at least 5 different unary operators used in C.		07
	(b)	Write a program to count vowel characters from a given string		07
		OR		
	(b)	Write a program to convert given integer number into binary number.		07
Q.3	(a)	What is function? Why to use it in a C program? Explain nesting of a function with a suitable example.		07
	(b)	Explain Array of Strings. How to declare and initialize array of strings? Discuss at least 4 string handling functions.		07
		OR		
Q.3	(a)	1.	Explain Static variable with suitable example.	04
		2.	What does it mean by Actual arguments and formal arguments? What is the scope of formal arguments?	03
	(b)	How to pass one dimensional array and two dimensional array as arguments in a function? – explain each with suitable example.		07
Q.4	(a)	1	Write short note on array of pointers	04
		2	How indirection operator and address operator are	03

			useful in implementing pointer? – explain with suitable example.	
	(b)		What is structure and pointer to structure? How to create them? How to access structure members by structure variable and pointer to structure? – Explain with suitable example.	07
			OR	
Q.4	(a)	1	Write short note on pointer arithmetic	03
		2	Explain pointer to pointer with suitable example	04
Q.4	(b)	1	Show structures to create Singly Linked List node and Double Linked List node.	03
		2	Write short note on enumerated data type.	04
Q.5	(a)		List and explain all the functions to write and read data to and from file.	07
	(b)	1.	List and explain at least 3 preprocessor directives beginning with #	03
		2	What is argc and argv? Where they are used? Explain with suitable example.	04
			OR	
Q.5	(a)	1	Discuss fflush( ), flushall( ) and feof( ) functions	03
		2	What is binary file? Explain all the file opening modes to open a binary file.	04
	(b)	1	Write short note on conditional compilation.	03
		2	Write short note on call by reference.	04

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