Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

MCA Integrated - SEMESTER-II • EXAMINATION – SUMMER • 2014

Su	bject	Code: 4420602 Date: 20-06-2014	
Su	bject	Name: Advanced C Programming (Fundamentals of Programming – II)	
	me: 1 tructio	0:30 am - 01:00 pm Total Marks: 70	
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Answer the following: i. Explain dangling pointer and Memory leak. ii. Differentiate between structure, union and enum. Write down various opening modes of file and their usage.	03 04 07
Q.2	` '	Write a user define function to calculate Electricity bill for given number of units. For first 100 units the rate would be Rs 1/unit, for next 100 units Rs. 2/unit and remaining units Rs. 5/unit. Create a structure having data member customer name, address and no of unit .Display electricity bill of five customers.	07
	(b)	What is a pre processor directive? Explain any five pre processor with its usage. OR	07
	(b)		07
Q.3	(a) (b)	Write an algorithm to convert infix expression into postfix expression. Write down various representation of Graph with the help of suitable example. OR	07 07
Q.3	(a) (b)	Differentiate between simple queue and circular queue. Write down the various operations and applications of queue. Construct a Binary Tree of following post order and in order traversal. In order: DBEAFCG Post Order: DEBFGCA	07 07
Q.4	(a) (b)	Write down the pre order traversal of constructed tree. Compare various types of linked lists in detail. Write a program to perform following operations on singly linked list i. Add node at end of list ii. Delete node iii. Search node	07 03 03 01
Q.4	(a) (b)	OR Differentiate between array and linked list. Write down the various applications of linked list in brief. Write short note on command line arguments and its usage and also write a program to make a DOS command "type" which shows the contents of given file.	07 07
Q.5	(a) (b)	Differentiate between i. int *p[3] and int (*p)[3] ii. *p++ and (*p)++ iii. Array name and pointer variable Write a program to print the file contents in reverse order and differentiate between text file and binary file	02 02 03 07

Q.5 (a) Write down the output of following code snippet (i) void main() 03 int a[]= $\{1,2,3,4,5\}$; int p=a, q=a[4]; printf("%d",q-p); (ii) #define swap(a,b) t=a;a=b;b=t; 04 void main() { static int a=10,b=20,t; if(a>b) swap(a,b); printf("%d, %d, %d",a,b,t); } Write short note on following: **(b)** pointer to function 3 i. 2 #pragma ii. Wild pointer 2 iii.
