

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
