Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA Integrated - SEMESTER–I • EXAMINATION – SUMMER • 2015

Subject Code: 4410603   **Date: 07-05-2015**
Subject Name: Fundamentals of Programming - I
Time: 10:30 am - 01:00 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) Fill in the blanks   **07**
1. An array of character terminated by null character is called _____.
2. _____is graphical and symbolic representation of process.
3. C was developed by_____
4. Return type of function that does not have any return type is declared as _____.
5. _____data type has range -128 to +127.
6. Function called itself is known as _____.
7. _____loop will definitely execute at least once even if condition is not satisfied.

(b) State true or false   **07**
1. Array is collection of mixed data type.
2. Source program is a program written in machine language.
3. Infinite loop can be prevented by continue statement.
4. A compiler translate high level language program into very high level language.
5. A function cannot return more than one value at a time.
6. PSEUDOCODE is mixture of English and programming language.
7. An assembly language referred as second generation programming language is a high level language.

Q.2 (a) Explain types of files in C.   **07**
(b) (i) Explain machine level language   **03**
(ii) Explain different type specifier of printf() function.   **04**

OR

(b) (i) Explain symbols of flow chart.   **03**
(ii) Write a short note on data types in c.   **04**

Q.3 (a) What is operator? List types of operator in C. Explain any two in detail.   **07**
(b) List out various form of looping statement. Explain syntax and flowchart of while loop. **07**

OR

Q.3 (a) Explain conditional statement ifí else if. Write a program to input number and check number is even or odd or zero. **07**
(b) Explain any two of following.   **07**
(i) Break statement (ii) Continue statement (iii) Goto statement

Q.4 (a) (i) Write difference between call by value and call by reference.   **04**
(ii) Explain purpose of global variable.   **03**
(b) What function prototype, function definition and function call? Explain with example. **07**

OR

Q.4 **(a)** (i) What is recursive function? Write a program to calculate factorial of even number using recursive function. **04**

(ii) Explain purpose of block scope variable. **03**

(b) Explain storage class in C. **07**

Q.5 **(a)** Explain sparse metrices. Write a program to calculate sum of diagonal element in 3x3 matrix. **07**

(b) What is string? Explain any three Character function in C with syntax and example. **07**

OR

Q.5 **(a)** Explain declaration and initialization of one dimension array. Write a program to input n elements in array and display largest element. **07**

(b) Explain gets() function. Write a program to accept a string(one word) from user and display triangle. e.g. APPLE will display triangle as below. **07**

A
AP
APP
APPL
APPLE

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