

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA Integrated - SEMESTER-I • EXAMINATION – WINTER • 2014

Subject Code: 4410603**Date: 29-12-2014****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) Differentiate the following: **07**
- 1) Flowchart and Algorithm
 - 2) i++ and ++i
 - 3) Variable declaration and Variable Definition
 - 4) While and Dohwhile Loop
 - 5) Formal and Actual Parameters
 - 6) Variable and Array
 - 7) Char and String
- (b) Do as directed: **07**
- 1) What is Pseudocode?
 - 2) Explain Ternary Operator in brief.
 - 3) What does the data type of a variable signify?
 - 4) What is the use of default in switch case statement?
 - 5) What is function return type?
 - 6) What is array subscript?
 - 7) Explain the use of getchar() function.
- Q.2** (a) (i) Write a note on generation of programming languages. **04**
(ii) Write an algorithm to find whether a number is even or odd. **03**
- (b) Write characteristics and uses of C programming language. **07**
- OR**
- (b) Explain printf, scanf functions and type specifiers. **07**
- Q.3** (a) Explain typecasting and typeconversion with example. **07**
(b) Explain switch case statement with example and write advantages of switch case statement. **07**
- OR**
- Q.3** (a) Explain if-else and if-else-if decision control statements. What is dangling else problem? **07**
(b) Explain while loop, nested for loop and goto statement with example. **07**
- Q.4** (a) What is the need for function? Explain function declaration, definition and call with example. **07**
(b) Write a program to calculate a factorial of number using recursion. **07**
- OR**
- Q.4** (a) What do you understand by scope of a variable? Explain in detail with suitable example. **07**
(b) What is array? How an element can be accessed from array and how a value can be stored in array? **07**
- Q.5** (a) How can array be used for inter-function communication? **07**
(b) Explain array of strings with example. **07**

OR

- Q.5** (a) List the operations performed on string. Explain any one.
- (b) Write a program to convert lower case string into upper case.
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