

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 Dohile 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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