

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER- I EXAMINATION – SUMMER 2016

Subject Code: Fundamentals of Programming

Date: 04-05-2016

Subject Name: 2610001

Time: 02.30pm to 05.00 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)** Write down various symbols of flowchart and draw a flow chart to find out maximum among three numbers. **07**
- (b)** Explain following terms with suitable example
1. Identifier **02**
 2. Symbolic Constant **02**
 3. Ternary operator **03**
- Q.2 (a)** Differentiate between following
1. Entry control loop and Exit Control loop **04**
 2. Break and continue **03**
- (b)** Write a program to print all prime numbers between 1 and 100. **07**
- OR**
- (b)** Write a program to print following pattern **07**
- ```
1
23
456
78910
```
- Q.3 (a)** What is an array? Write down the code snippet to initialize one and two dimensional array. **07**
- (b)** Explain all storage class in detail. **07**
- OR**
- Q.3 (a)** Explain dynamic memory allocation in detail. **07**
- (b)** Write a program to find product of two 3×3 Matrices. **07**
- Q.4 (a)** Differentiate between following
1. Call by value and call by reference **04**
  2. Formal parameter and actual parameter **03**
- (b)** Write program to convert a string in to upper case without using built in function. **07**
- OR**
- Q.4 (a)** What is Pointer? Write down advantages, disadvantages and applications of pointer. **07**
- (b)** Differentiate between Structure, union and enum with proper example **07**
- Q.5 (a)** Differentiate between Recursion and iteration with suitable examples. **07**
- (b)** Explain various file opening modes in detail. **07**
- OR**
- Q.5 (a)** Write down the pros and cons of the Linked list? Write a program to add node at last in the singly linked list. **07**
- (b)** Write short note on following
1. Bitwise operator **04**
  2. Command line arguments **03**

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