

GUJARAT TECHNOLOGICAL UNIVERSITY**MCA – SEMESTER – I • EXAMINATION – WINTER - 2016****Subject Code: 2610001****Date: 31/12/ 2016****Subject Name: Fundamental of Programming****Time: 10.30 AM TO 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) Do as Directed

1. Explain Comma Operator with appropriate example(s). **01**
2. Give output of followings **06**

```
i) int main()
{
    int x = 10,y=15,a,b;
    a = x++;
    b = ++y;
    printf(“%d%d \n”,a,b);
    return(0);
}
```

```
ii) void main()
{
    while (0)
        printf(“\t GTU”);
}
```

```
iii) void main()
{
    int i;
    for (i=-10;!i; i++)
        printf(“%d”,-i);
}
```

- (b) Draw a flowchart to display sum of digits of given N number. **07**
For example, if Input: N = 123 then Output: 1+2+3 = 6

Q.2 (a) Explain Generation of programming languages with their advantages and disadvantages. 07

- (b) Write a program that checks whether a character entered by the user is a vowel or not. (Note: Using Switch statement). **07**

OR

- (b) Differentiate following: **07**
 - i) Switch statement Vs If Statement
 - ii) Continue Vs Break Statement
 - iii) While Statement Vs Do While Statement

- Q.3 (a)** What is Array? How to declare and initialize array in C language? **07**
Write a program to search second largest number from 1-Dimensional Array.
- (b)** List String handling inbuilt functions. Explain any three inbuilt string handling functions with syntax and example(s). **07**
- OR**
- Q.3 (a)** What is String? What are the methods to read string from keyboard? **07**
Write a program to find length of a given string.
- (b)** Explain scanf conversion facility provided by scanf() with suitable examples. **07**
- Q.4 (a)** What is Function? What are the characteristics of function? What are the advantages of function? **07**
- (b)** How the structure differs from Array? Discuss structure within structure concept with example. **07**
- OR**
- Q.4 (a)** Explain Call By Value and Call By Reference in detail. **07**
- Q.4 (b)** Write the meaning of following declarations. **07**
int f(); int **p; int (*pa)[]; int (*pf)(); int *ap[]; int aa[][];
int af[]()
- Q.5 (a)** Explain Sequential and Random Access file? Explain any five file handling functions. **07**
- (b)** Differentiate Static Memory Allocation and Dynamic Memory Allocation. **07**
- OR**
- Q.5 (a)** What is command line argument? Explain argc and argv in command line arguments with suitable example. **07**
- (b)** Discuss C Preprocessor statements with example. **07**
