

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-II [All Branch] examination June 2009****Subject code: 110003****Subject Name: Computer programming & Utilization****Date: 10/06/2009****Time: 10:30am-1:00pm****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) | Draw flowchart to solve following series $1! + 2! + 3! + \dots + n!$ | 05 |
| (b) | Compare Procedure oriented and Object oriented programming. | 04 |
| (c) | Write a C- program read in an array of integers and print its elements in reverse order. | 05 |

Q.2

- | | | |
|-----|---|-----------|
| (a) | Find out the output of following C code. Assume all the libraries have been included and code is syntactically corrected. | 07 |
|-----|---|-----------|

(i)

```
void main()
{
    int iX=7,iY=8,iZ=9;
    printf("\n %d %d %d",++iX,iX,iX++);
    printf("\n %d %d %d", iZ,++iZ,iZ++);
}
```

(ii)

```
void main()
{
    int iA = 6, iB = 6;
    int *P1 = &iA, *P2 = &iB;
    printf("\n %d",(*P1)++);
    printf("\n %d",--(*P2));
    printf("\n %d", ++(*P2)-*P1);
}
```

- | | | |
|-----|--|-----------|
| (b) | Explain various types of loop available in C with example. | 07 |
|-----|--|-----------|

OR

- | | | |
|-----|--|-----------|
| (b) | Draw block diagram of computer and explain each block. | 07 |
|-----|--|-----------|

Q.3

- | | | |
|-----|---|-----------|
| (a) | Explain various types of operator available in C | 07 |
| (b) | What is type conversion? Explain implicit type conversion and explicit type conversion with example | 07 |

OR**Q.3**

- | | | |
|-----|---|-----------|
| (a) | Explain operator precedence and associativity | 05 |
| (b) | Explain break and continue with example | 04 |
| (c) | What do you mean by recursive function? Explain with example. | 05 |

- Q-4**
- (a) Define following **04**
 I. Operating System
 II. Compiler
 III. Application software
 IV. System Software
- (b) What is pointer ? Explain Array of pointer with example. **05**
- (c) Write a function (using a pointer parameter) that calculate maximum element from given array of integer numbers. **05**

OR

- Q.4**
- (a) Explain nested structure with example. **05**
- (b) What is user-defined function? Explain Actual argument and formal argument. **04**
- (c) Write a program to that read two string and compare them using the function **strcmp()** and print the message that first string is equal, less, greater than the second one. **05**

- Q.5**
- (a) Define Following **05**
 a) Define following terms
 I. Class
 II. Object
 III. Dynamic binding
 IV. Polymorphism
 V. Destructor
- (b) Explain characteristic of static data member and static member function. **05**
- (c) Explain various type of Access modifier in C++. **04**

OR

- Q.5**
- (a) What are the different forms of Inheritance? Explain each form with example. **05**
- (b) What is friend function? Describe its characteristic. **05**
- (c) State whether following statement are true or false **04**
 I. Function can not return class objects
 II. A function designed as public can not be accessed like any other ordinary functions
 III. Destructor never take any argument
 IV. Inheritance aids data hiding
