

GUJARAT TECHNOLOGICAL UNIVERSITY
B.E. all Sem-I Examination December 08/January 09
Computer Programming and Utilization (110003)

DATE: 24-12-2008, Wednesday

TIME: 12.00 to 2.30 p.m.

MAX. MARKS: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q-1** Attempt following programs in **C/C++** language.
- (a) Write a program to read two matrix from the user and store the multiplication of two matrix in the resultant matrix. **05**
 i.e. $C=A * B$
- (b) Write a program to generate Fibonacci series of n given numbers using function named fibbo. **05**
 i.e. 1 1 2 3....
- (c) Write a c++ program which is having class named student. It has two functions named readdata() and writedata() It has member elements called studID, studname, studphno, studpercentage. assume suitable data type for variable. And read the data element from the user and print the same on the screen using member functions. **04**
- Q-2**
- (a) Do as directed. **07**
- i) Find out the output of following C code. Assume all the libraries has been included and code is syntactically correct.
- ```

Void main()
{
 Char cAddress[30]="Gtu Examination";
 Int iX=67584;
 Float fZ=95.7658;
 Printf("%.6s\n",cAddress);
 Printf("%.7s\n",cAddress);
 Printf("%010d\n",iX);
 Printf("%10d\n",-iX);
 Printf("%*.*f\n",7,2,fZ);
 Printf("%e\n",fZ);
 Printf("%12.4e\n",-fZ);
}

```
- ii) Find out the error if any in the following code and correct it and give the output.
- ```

Void main()
{
  Int iNo[3] = {10,20,30,40};
  Char cName[] = "exam";
  Char cMidd[]="university";
  Strcpy(cName,cMidd);
  Printf("%d",iNo[0]);
  Printf ("%s",cName);
}

```

(b)	Attempt any two .	07
	i) What is structure? How do we declare and access structure variables?	
	ii) What do you mean by recursive function? Explain with small example.	
	iii) Explain conditional operator with small example.	
Q-3	Do as directed.	
	i) Draw a flow chart to find the maximum number out of three given numbers.	05
	ii) What is program? Explain break and continue with example.	04
	iii) Explain following string manipulation functions. Strncmp(),strlen(),strcat(),strstr(),strchr());	05
	OR	
Q-3	Do as directed.	
	i) Draw a flow chart to do the sum of 10 elements read from the user.	05
	ii) List out operators used in C language and explain any four with example.	05
	iii) What do you mean by constants in C language? Explain types of constants in detail.	04
Q-4	Do as directed.	
	i) What is pointer? Write a program to do swapping of two elements using pointers.	05
	ii) List out the categories of functions. Explain any one category with example.	05
	iii) State the difference between Structure and Union.	04
	OR	
Q-4	Do as directed.	
	i) Write a program to find out sum of 6 elements of array using pointer.	05
	ii) What is scope, visibility and life time of variables? Explain Static variables with example.	05
	iii) State the difference between entry control loop and exit control loop.	04
Q-5	Do as directed.	
	i) Explain the concept of Class, Object, Polymorphism and Inheritance.	04
	ii) Explain structure of class with example.	05
	iii) What is inline function? Explain with example.	05
	OR	
Q-5	Do as directed.	
	i) Give the difference between object oriented language and procedure oriented language.	04
	ii) Explain friend function with example.	05
	iii) What are the characteristics of constructor? Explain how to initialize the variable using constructor.	05