GUJARAT TECHNOLOGICAL UNIVERSITY
BE SEM- I / II Examination-Dec.-2011

Subject code: 110003  Date: 27/12/2011
Subject Name: Computer Programming and Utilization
Time: 10.30 am -1.00 pm  Total marks: 70

Instructions:
1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) Answer the following.
   (i) Explain printf() and scanf() giving their syntax.
   (ii) What is recursion? Explain it with suitable example.
   (iii) Write short note on Pointer.
   (iv) Explain switch…case statement.
   (b) What is Algorithm?

Q.2 (a) Explain various symbols used in Flowchart and draw the flowchart for finding Smallest number out of three given numbers.
   (b) Write a program in C to generate Fibonacci series like following:
       1, 1, 2, 3, 5, 8, 13 …
       Generate 20 such numbers.

Q.3 (a) Draw the Block diagram of Computer System and explain.
   (b) Write a program to display following pattern using nested for loops.
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       * * * *
       * * *
       * *

Q.4 (a) Explain various operators used in C language.
   (b) Explain how string is defined in C. Write user defined functions for the following:
       (i) strlen() : to find length of string.
       (ii) strcat() : to concatenate two strings.

Q.5 (a) Write a C program to Add two 3 X 3 Matrix.
   (b) Define: Software, Hardware, Higher level Language, Operating System.

Q.6 (a) Write a C program to read 10 numbers from user and find Sum, Maximum and Average of them.
   (b) What is used defined function? Explain types of functions with example.

Q.7 (a) What is structure? Explain with example how to declare a structure and how to initialize it.
   (b) Write short notes on following (Any Two).
       (i) File Operations in C.
       (ii) Data types in C.
       (iii) Scope and Lifetime of Variable.

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