JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech I Year Examinations, May/June-2013
COMPUTER PROGRAMMIMG AND DATA STRUCTURES
(Common to all Branches)

Time: 3 hours   Max. Marks: 75

Answer any five questions
All questions carry equal marks

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1.a) What are the major differences between a time-sharing and a client/server environment?

 b) Develop a flow chart to find the maximum number in a given list of numbers.

2.a) Explain with syntax the for and while iterative control structures in C.

 b) Explain with suitable examples the following statements in C:
  i) break   ii) continue

3.a) Explain briefly the functions of a C Preprocessor.

 b) Develop a C Program for multiplying two matrices.

4.a) Discuss with syntax the purpose of the malloc function in C.

 b) Develop a C Program to determine if the given string is a Palindrome or not. A Palindrome is a message that reads same both forwards and backwards.
  Ex. for a Palindrome is madam.

5.a) Discuss the differences between a structure and union in C with an example.

 b) Develop a C program that reads two complex numbers, calls a function for adding these two complex numbers and displays the result. Represent the complex number using a structure in C.

6.a) Distinguish between a text file and a binary file.

 b) Develop a C Program to count the number of blanks in a text file. The file name is supplied as a command-line argument.

7.a) Develop a C Program for converting the given infix expression into postfix form using a stack. Use an array to represent the stack.

 b) Define Abstract data type.

8. Develop a C Program for implementing Quick sort for sorting an array of integers in ascending order.

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