JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD

B.Tech I Year I Semester Examinations, May/June-2013

PUTER 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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