JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B.Tech I Year Examinations, June - 2014
COMPUTER PROGRAMMING 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) Write about creation and running of programs.
  b) Define algorithm. Write an algorithm to find a given number is whether positive or not.
  c) Draw flowchart to find sum of first 10 natural numbers.

2.a) What is the importance of precedence and associativity? Evaluate the following expression.
    (20/4)*5+6/3-3+7.
  b) Demonstrate the usage of repetition statements in C language with suitable examples.

3.a) Define Function. Write about user defined functions.
  b) What is recursion? Write a C program to find GCD of two numbers.
  c) Write a program to perform subtraction of two matrices.

4.a) Define pointer. Explain memory allocation functions.
  b) Differentiate call by value and call by reference with an example.

5.a) Define structures. Explain about nested structures.
  b) Write about string manipulation functions.
  c) What is the importance of enumerated types?

6. Write about the following with clear syntax.
    a) Files in C.
    b) Formatted input/output functions.

7. Explain the following:
    a) Bubble sort
    b) Binary search.

8.a) What is an Abstract data type? Write about stack operations.
  b) Write an algorithm to perform infix to postfix conversion.

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