R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, HYDERABAD
B. Tech I Year Examinations, December-2012
COMPUTER PROGRAMMIMG AND DATA STRUCTURES
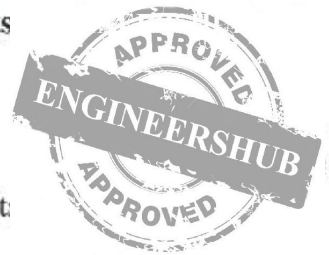### (Common to all Branches)

Time: 3 hours

Max. Marks

Answer any five questions
All questions carry equal marks

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1.a) Explain and specify the interactions between various component support the basic functionality of a computer.
  b) Draw the flow chart to check whether a given number is perfect or not.
  c) Describe various categories of computing environments.   [6+4+5]

2.a) Explain the control statements in 'C' language with an example.
  b) Define type conversion? Explain briefly about implicit and explicit type conversions.   [7+8]

3.a) Define an array. What are different types of array? Explain with examples.
  b) Define Recursion. Write a C-Program to find the factorial of a number using Recursion.   [7+8]

4.a) Describe the features of pointers. Explain an array of pointer with an example.
  b) Write a C program to accept string using character pointer and display it.   [7+8]

5.a) Define self referential structure. How it differs from nested structures. Explain with an illustrative example.
  b) Write a short note on typedef and enum.   [7+8]

6.a) Write C-language program that reads a C-program file and outputs number of lines in the program.
  b) List and explain the streams functions for binary files along with their prototypes.   [7+8]

7. Explain the Quick sort algorithm with the help of an example.   [15]

8.a) Explain the procedure for converting infix expression to postfix expression with an example routine.
  b) Explain about:
     i) Stack   ii) queue.

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