

Code No: C5801

R09

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

M. Tech I Semester Examinations, October - 2015

ADVANCED PROBLEM SOLVING

(Computer Science and Engineering)

Time: 3hours

Max.Marks: 60

Answer any five questions

All questions carry equal marks

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1. Explain about object-oriented concepts and how they are implemented in Java. [12]
 - 2.a) Write an algorithm to convert given infix expression into postfix notation.
b) Explain about Queue ADT implementation. [6+6]
 - 3.a) How a priority queue is realized using heap? Explain with an example.
b) What are the differences between B-Tree and B+ Tree? [6+6]
 4. What is hashing? Explain different collision resolution techniques. [12]
 - 5.a) Write Knuth-Morris-Pratt pattern matching algorithm.
b) Explain about suffix tries. [6+6]
 - 6.a) Explain about single source shortest path algorithm.
b) Differentiate BFS and DFS graph search algorithms. [6+6]
 - 7.a) Write the Quick sort algorithm.
b) Compare different searching methods. [6+6]
 8. Write short note on the following:
a) Non-tail recursion
b) Red-Black trees
c) Binary Tree ADT. [4+4+4]

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