

Code: IUT 9A05302

IUT

B. Tech II Year I Semester (R09) Supplementary Examinations, May 2013

**ADVANCED DATA STRUCTURES**

(Electronics & Communication Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Discuss about the basic concepts of object-oriented programming.  
(b) Write a note on formatted console I/O operations.
- 2 (a) Write a program to perform complex number arithmetic operations using operator overloading.  
(b) Explain the different types of inheritance supported by C++.
- 3 (a) With an example, explain infix to postfix conversion and infix to prefix algorithms.  
(b) State any two applications of stacks and queues.
- 4 (a) Mention the difference between hashing & extendible hashing with example.  
(b) What are the advantages of open addressing hashing? Explain.
- 5 (a) Differentiate between internal and external sorting.  
(b) Explain any one external sorting method with suitable example.
- 6 (a) What do you mean by AVL trees? Explain.  
(b) Explain the advantages and disadvantages of using a binary search tree with example.
- 7 Compare and contrast between splay tree and B-tree.
- 8 Explain the working of Knuth-Morris-Pratt algorithm on binary strings.

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