

Code: 9A05302

R09

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

ADVANCED DATA STRUCTURES

(Common to ECC, CSS, IT & CSE)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

- 1 Write a C++ program to perform 2D matrix operations as follows:
 - (a) Define class MATRIX, use appropriate constructor(s).
 - (b) Define methods for the following two matrix operations: determinant and transpose.
 - (c) Write a main program to demonstrate the use of the MATRIX class and its methods.
- 2
 - (a) What is reusability? How do you achieve this in C++?
 - (b) What are the different ambiguities involved in multiple inheritance and how they are resolved?
- 3 Write a C++ program for array implementation of stack using ADT.
- 4
 - (a) Explain how a hashing table can be represented.
 - (b) Describe any two hashing functions with example.
- 5
 - (a) Write a C++ program to implement heap sort algorithm.
 - (b) Describe any one external sorting method.
- 6 What is a binary search tree? What is the average depth of a binary search tree? How is it different from binary tree? Justify your answer.
- 7 Compare indexed balanced tree with balanced binary tree. Give suitable example.
- 8 What is meant by prefix matching? Explain with example how prefix matching is done.
