

Code: IT4T1

II B.Tech - II Semester – Regular Examinations – May 2016

ADVANCED DATA STRUCTURES (INFORMATION TECHNOLOGY)

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1)

- a) Define Hash Table.
- b) Give an example for Rehashing.
- c) If no. of nodes in a SKIP List is “n”, how many lists there in SKIP Lists?
- d) AVL stands for? Give an example.
- e) Define single rotation in an AVL tree.
- f) List out different Graph Traversal Techniques.
- g) PATRICIA stands for.....
- h) Define Digital search Tree.
- i) Define Binary Tree.
- j) Define field and record.
- k) What are the different modes defined for file operations.

PART – B

Answer any *THREE* questions. All questions carry equal marks.

3 x 16 = 48 M

2)

- a) Explain Open and Closed hashing with suitable example.

10 M

- b) What is a skip list? Explain insertion and deletion operations on Skip Lists . 6 M
- 3) Explain all the single & double rotations on AVL with examples. 16 M
- 4)
- a) Prove that kruskal's algorithm generates a minimum cost spanning tree. 8 M
- b) Explain how Dijkstra's algorithm is used to solve shortest path problem. 8 M
- 5)
- a) Explain the Boyer – Moore algorithm. 10 M
- b) What are the advantages and disadvantages of digital search trees? 6 M
- 6)
- a) Describe the procedures for seeking different positions within a file. 8 M
- b) Explain various methods for organizing the records of a file. 8 M