Code No: G4001/R13

M. Tech. I Semester Supplementary Examinations, December-2016
ADVANCED DATA STRUCTURES/ DATA STRUCTURES/
ADVANCED DATA STRUCTURES AND ALGORITHM ANALYSIS
(Common to IT, CS&T, CS and CS&E)

Time: 3 hours   **Max. Marks: 60**

Answer any FIVE Questions
All Questions Carry Equal Marks

1.	a	What is a Circular List? Write a program to search in a circular linked list that has a header node?	6M
	b	Define Queue. Write the advantages and disadvantages of Queues.	6M
2.	a	Write a program to implement Doubly Linked List.	6M
	b	How Partition is done in Quick Sort? Explain with an example.	6M
3.	a	What is binary tree? What for it is used? Mention its properties.	6M
	b	Explain about different graph storage representations with examples.	6M
4	a	Define dictionary. Give the applications of dictionary with duplicates in which sequential access is desired.	6M
	b	Explain how open hashing and closed hashing is done with examples.	6M
5.	a	What is collision? Explain different collision resolution methods.	6M
	b	Explain the insertion and deletion operations performed on binary heap with an example.	6M
6.	a	What is an Ascending Priority Queue? Explain how to implement this using Binary Heap.	6M
	b	Write a program for binary search tree ADT.	6M
7.	a	Explain how AVL tree is different from the binary search tree.	6M
	b	Define B-Tree. Generate a B-Tree of order 3 (2-3 tree) for the following key values 25,10,12,15,39,64,53	6M
8.	a	Write the advantages of splay tree in representation of dictionaries.	6M
	b	What is meant by height balanced tree? Write a program to determine the height of an AVL tree?	6M

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