VIGNAN'S Institute of Information Technology (Autonomous)::Visakhapatnam VR20

II B. Tech II Semester Mid-1 Examinations, May - 2022

Course Code: 1005202201 Course Name: Advanced Data Structures

Branch: CSE / IT Max. Marks :30M Time: 90 min. Date: 09-05-2022

Question Paper Consists of **Part – A** and **Part – B**

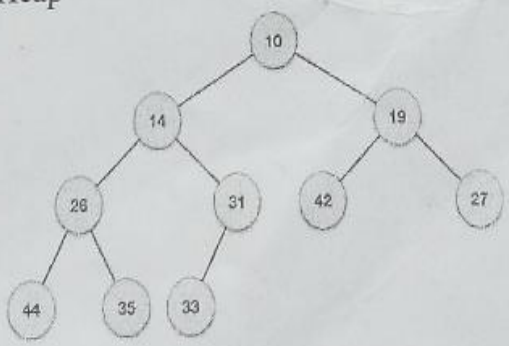
Answer all questions

Part – A

Q.No.		QUESTIONS	MARKS
1.	a.	State operations of dictionaries.	2M
	b.	Show the model of priority Queue	2M
	c.	Define the following: 1. Full Binary Tree 2. Complete Binary Tree	2M

Part – B

Q.No.		QUESTIONS	MARKS
2.	a.	Using the hash function 'key mod 7', insert the following sequence of keys in the hash table- 50, 700, 76, 85, 92, 73 and 101 Use separate chaining technique for collision resolution.	5M
	b.	Take an example and explain the following Overflow handling techniques i. Quadratic probing ii. Double Hashing	5M
3.	a.	Show the result of inserting 10,12,1,14,6,5,7,8,15,3,7,9 into an initially empty min heap with neat diagrams.	5M
	b.	Explain Bubble up (Insert-13) and Sink down (Delete_Min) operations for the following Binary Heap	5M



4.	a.	Insert the sequence of integers 13, 3, 4, 12, 14, 10, 5, 1, 8, 2, 7, 9, 11, 6 and 18 in an initially empty Binary Search Tree	4M