UNIT-IV

7. Write a program for Merge sort with an example. Show that the time complexity of a Merge sort of n elements is O(n logn)	12	[EURCS-304/EURIT-304] B.Tech. DEGREE EXAMINATION
OR	4	CSE & IT III SEMESTER
8. a) Write a program for Linear Searchb) Discuss various types of Hashing Techniques with examples	4 8	DATA STRUCTURES
UNIT-V		(Effective from the admitted batch 2007–08) Time: 3 Hours (Effective from the admitted batch 2007–08) Max.Marks: 60
 9. What are all different types of graph representations? Explain each with examples OR 10. a) Write Kruskal's Algorithm to search an element in a Graph b) Specify the applications of Graphs 	12 10 2	Instructions: Each Unit carries 12 marks. Answer all units choosing one question from each unit. All parts of the unit must be answered in one place only. Figures in the right hand margin indicate marks allotted.
		UNIT-I
[3,7/III S		 What is an Array? Explain the types of Arrays i.e., one, two and three dimensional arrays with examples. Write an algorithm to multiply two matrices. Explain indirect addressing (2+3+5+2)
		OR
		Write all the operations on single, double and circular linked lists in an algorithm UNIT-II
		3. What is an ADT? Define ADT for a stack. Write algorithms for array and linked representation of stack operations (2+5+5)
		OR
		4. Define Queue. Write algorithms for array and linked representation of Queue operations UNIT-III
		5. List out the operations on B ⁺ trees. Explain with the help of algorithms OR
		UK

6. a) Explain AVL tree rotations

b) Explain Binary tree traversals

[Nov-11]

(2+3+5+2)

12

(2+5+5)

12

6

6

UNIT-IV

7. Write a program for Merge sort with an example. Show that the tin complexity of a Merge sort of n elements is O(n logn)	ne 12	[EURCS-304/EURIT-304] B.Tech. DEGREE EXAMINATION		
OR 8. a) Write a program for Linear Search	4	CSE & IT III SEMESTER		
b) Discuss various types of Hashing Techniques with examples	8	DATA STRUCTURES		
UNIT-V		(Effective from the admitted batch 2007–08) Time: 3 Hours		
 What are all different types of graph representations? Explain each with examples OR 	12	Instructions: Each Unit carries 12 marks. Answer all units choosing one question from ea All parts of the unit must be answered in one pl		
10. a) Write Kruskal's Algorithm to search an element in a Graphb) Specify the applications of Graphs	10 2	Figures in the right hand margin indicate marks		
		UNIT-I		
[3,7/III		 What is an Array? Explain the types of Arrays i.e., one three dimensional arrays with examples. Write an algo- multiply two matrices. Explain indirect addressing 		
		OR		
		2. Write all the operations on single, double and circular in an algorithm		
		UNIT-II		
		What is an ADT? Define ADT for a stack. Write algo- array and linked representation of stack operations		
		OR		
		 Define Queue. Write algorithms for array and linked a of Queue operations 		
		UNIT-III		
		5. List out the operations on B ⁺ trees. Explain with the h algorithms		
		0.70		

[Nov-11]

ON

	DATA STRUCTURES (Effective from the admitted batch 2007–08)	
Time: 3 Hour		s: 60
Instructions:	Each Unit carries 12 marks. Answer all units choosing one question from each unit. All parts of the unit must be answered in one place only. Figures in the right hand margin indicate marks allotted.	
	UNIT-I	
three dim	an Array? Explain the types of Arrays i.e., one, two and tensional arrays with examples. Write an algorithm to two matrices. Explain indirect addressing (2+3+	-5+2)
	OR	
2. Write all in an algo	the operations on single, double and circular linked lists orithm UNIT-II	12
	in ADT? Define ADT for a stack. Write algorithms for linked representation of stack operations (2+	5+5)
	OR	
_	•	5+5)
	UNIT-III	
5. List out the algorithm		12
	OR	
6. a) Expla	ain AVL tree rotations	6
b) Expla	ain Binary tree traversals	6