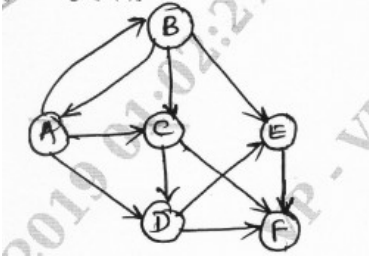


CRM08	Rev 1.10	CSE	11/02/2021
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**CONTINUOUS INTERNAL EVALUATION- 3**

Dept:CSE	Sem / Div: 3/ A & B	Sub:Data Structures and its Applications	S Code:18CS32
Date:15/02/2021	Time: 2:30-4:00 pm	Max Marks: 50	Elective:N
Note: Answer any 2 full questions, choosing one full question from each part.			

Q N	Questions	Marks	RBT	COs
<b>PART A</b>				
1 a	Write C function for insertion sort. Sort the following data using insertion sort. 52, 34, 11, 75, 46, 29, 64	8	L2	CO3,4
b	Obtain DFS and BFS traversal for the following graph. Also write adjacency matrix and list representation. 	8	L3	CO3,4
c	What are the advantages of threaded binary trees over binary trees? Explain threaded binary trees with example.	9	L3	CO3,4
<b>OR</b>				
2 a	Suppose 9 cards are purchased as follows 348, 143, 361, 423, 538, 128, 321, 543, 366. Apply Radix sort to sort them in 3 phases and give its complexity.	8	L2	CO3,4
b	Write a c program for deleting a key element from a binary search tree.	8	L2	CO3,4
c	Explain sequential file organization. List advantages and disadvantages.	9	L3	CO3,4
<b>PART B</b>				
3 a	What is collision? What are the methods to resolve collision? Explain linear probing with an example.	8	L3	CO3,4
b	Differentiate between directed and undirected graph with example.	8	L3	CO3,4
c	Explain different file attributes.	9	L3	CO3,4
<b>OR</b>				
4 a	Construct binary search tree for the following data: 100, 20,45,80,110,65,90,25,80,120,30,95. Write Inorder, Preorder and Postorder traversals for the constructed binary search tree.	8	L3	CO3,4
b	What is indexing? Explain the different kinds of indices. Explain cylinder surface indexing.	8	L3	CO3,4
c	What is hash function? What are different types of hash functions? Explain with example.	9	L2	CO3,4