R15

Code No: 821AF

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA II Semester Examinations, October/ November - 2020
DATA STRUCTURES AND ALGORITHMS

Time: 2 Hours   Max.Marks:75

Answer any five questions
All questions carry equal marks

1.a)	Define Stack ADT and explain the operations of Stack with neat Sketch.	
b)	Write a program to implement Queue Operations.	[7+8]
2.a)	Describe Binary Tree traversals with examples.	
b)	Write an algorithm of DFS.	[7+8]
3.a)	Write about Radix Sort with an example.	
b)	Explain Hashing with example.	[7+8]
4.	Construct the AVL tree of the following elements 45, 63, 72, 54, 50, 32, 85.	[15]
5.a)	Differentiate between Prim's and Kruskal's Algorithms with examples.	
b)	Discuss about KMP Algoritm with an example.	[7+8]
6.a)	Define ADT and Write the procedure to convert infix to postfix.	
b)	Write about Sequential and Linked allocation of given list ADT.	[7+8]
7.a)	Explain Adjacency List Graph Representation method.	
b)	Explain about priority queues.	[7+8]
8.a)	Explain Merge Sort with an example.	
b)	Write an algorithm of Binary search.	[7+8]

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