Code No: 812AF

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
MCA II Semester Examinations, July/August - 2021
DATA STRUCTURES AND ALGORITHMS

Time: 3 Hours   Max. Marks: 60

Answer any five questions
All questions carry equal marks
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1. Write an algorithm to find the factorial of a number and also compute the time complexity of the same.   [12]

2. Explain about the operations of Queue with an example.   [12]

3. Explain the priority queue with an example.   [12]

4. Explain the tree traversals of binary tree with an example.   [12]

5. Explain about the Radix sort with an example.   [12]

6. Construct the AVL tree of the following data:
    M,K,E,T,O,L,Q,A,Y,F,V.   [12]

7. Explain the deletion operation of B-tree in different cases with an example. [12]

8. Explain about the Single Source Shortest path problem with an example.   [12]

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