

Roll No.

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M.Tech. (CSE) (Sem.-1)

ADVANCED DATA STRUCTURES

Subject Code : MTCS-102-18

M.Code : 75154

Date of Examination: 14-01-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.

2. Each question carries TWELVE marks.

1.
 - a) Define Dictionary and Dictionary with duplicates. List the operation performed on dictionary.
 - b) Explain in detail how symbol tables are implemented? Mention the applications of symbol tables too.
2. Write short notes on :
 - a) Rehashing
 - b) Extendible hashing.
3. What are probabilistic skip lists? Explain search and update operations on skip lists.
4. Explain deletion procedure in AVL tree with an example.
5.
 - a) Draw the flowchart for Knuth-Morris-Pratt algorithm,
 - b) Explain the main features of Boyer-Moore algorithm.
6. What is range searching in computational geometry? Explain two dimensional range searching.
7. **Discuss about :**
 - a) Lazy binomial queues.
 - b) Recent trends in hashing
8. **Create a 2-3 tree from the following list of data items :**
5, 6, 8, 21, 12, 30, 34, 27, 23, 4, 33, 7, 24, 9, 10, 11, 13, 38

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.