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Course: CSE3004_Design and Analysis of Algorithms_AP2025262001439

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Test Duration: 00:12:24 Test Start Time: Sep 16, 2025 | 06:07 PM Test Submit Time: Sep 16, 2025 | 06:20 PM

Summary Sections Filters

1 MCQ (15)

Question No: 11

Multi Choice Type Question

What is the main difference between a regular Binary Search Tree (BST) and an Optimal Binary Search Tree (OBST)?

- ✓ OBST minimizes the search cost, considering probabilities of access, whereas BST does not
- OBST is balanced, whereas BST is not
- OBST allows duplicate keys, while BST does not
- OBST requires more space than BST

Status Correct | Mark obtained 1/1 | Hints used 0 | Level Easy | Question type MCQ Single Correct | Subject Data Structure | Topic Tree | Sub Topic Binary Search Tree
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Question No: 12

Multi Choice Type Question

Which of the following is NOT a property of an Optimal Binary Search Tree?

- It is computed using a dynamic programming approach
- It considers access probabilities for optimal structure
- ✓ It is always a balanced binary search tree
- It minimizes the expected search cost

Status Correct | Mark obtained 1/1 | Hints used 0 | Level Easy | Question type MCQ Single Correct | Subject Data Structure | Topic Tree | Sub Topic Binary Search Tree
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Question No: 13

Multi Choice Type Question

In the dynamic programming approach for OBST, which table is used to store the computed minimum cost for subproblems?

- Prefix sum table
- Probability matrix
- ✓ Cost matrix
- Adjacency matrix

Status Correct | Mark obtained 1/1 | Hints used 0 | Level Easy | Question type MCQ Single Correct | Subject Data Structure | Topic Tree | Sub Topic Binary Search Tree
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Question No: 14

Multi Choice Type Question

A node of the weight-balanced tree has

- ✓ Key, left and right pointers, size
- Key, size
- Key
- Key, value

Status Correct | Mark obtained 1/1 | Hints used 0 | Level Medium | Question type MCQ Single Correct | Subject Data Structure | Topic Tree | Sub Topic Binary Search Tree
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Question No: 15

Multi Choice Type Question

What are the applications of a weight-balanced tree?

- ✓ Dynamic sets, dictionaries, sequences, and maps
- Heaps
- Storing strings
- Sorting

Status Correct | Mark obtained 1/1 | Hints used 0 | Level Easy | Question type MCQ Single Correct | Subject Data Structure | Topic Tree | Sub Topic Binary Search Tree
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