**PT-5**

**Organized Quiz Questions (Final Set)**

1. Which operation is NOT a basic operation on a binary search tree?

* Insertion
* Deletion
* Traversal
* Merging

1. Huffman coding is an example of which type of data compression?

* Lossless Compression
* Lossy Compression
* Run-Length Encoding
* Arithmetic Compression

1. Which data structure is used to store characters as a tree for efficient string matching?

* Suffix Array
* Tries
* Hash Table
* Binary Search Tree (BST)

1. Which algorithm is used to find the shortest path in a graph with negative edge weights?

* Bellman-Ford Algorithm
* Dijkstra's Algorithm
* Prim's Algorithm
* Kruskal's Algorithm

1. In Huffman coding, what is the most common approach for constructing the binary tree?

* Top-Down
* Bottom-Up
* Left-Right
* Right-Left

1. Which data structure represents an undirected graph without cycles?

* Tree
* Array
* List
* Stack

1. What is a common application of a trie data structure?

* Compression
* Searching
* Sorting
* Storing Graphs

1. Which graph traversal is used for finding the shortest path in a weighted graph?

* Dijkstra's Algorithm
* Breadth-First Search (BFS)
* Depth-First Search (DFS)
* Kruskal's Algorithm

1. Huffman coding is more efficient when characters have similar or different frequencies?

* Similar Frequencies
* Different Frequencies
* Random Frequencies
* Equal Frequencies

1. In graph theory, what is the minimum number of edges required to form a connected graph with n vertices?

* n-1
* n+1
* n/2

1. Which operation is NOT typically performed on a hash table?

* Insertion
* Deletion
* Traversal
* Searching

1. Which algorithm is used to find the longest path in a directed acyclic graph (DAG)?

* Topological Sort
* Breadth-First Search (BFS)
* Depth-First Search (DFS)
* Dijkstra's Algorithm

1. Huffman coding is a form of which coding technique?

* Variable-Length Encoding
* Fixed-Length Encoding
* Run-Length Encoding
* Arithmetic Encoding

1. Which data structure is used for backtracking in algorithms like Depth-First Search (DFS)?

* Stack
* Queue
* Priority Queue
* Linked List

1. In graph theory, a path between two vertices where no vertex appears twice is called?

* Walk
* Trail
* Circuit
* Cycle