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Data Structure Questions and Answers



Our 1000+ "Data Structure – Part 1" (along with 1000+ "Data Structures & Algorithms – Part 2") questions and answers focuses on all areas of Data Structure covering 200+ topics in Data Structure. One can read **Part 2 Here**. (https://www.sanfoundry.com/1000-data-structures-algorithms-ii-questions-answers/) These topics are chosen from a collection of most authoritative and best reference books on Data Structure. One should spend 1 hour daily for 2-3 months to learn and assimilate Data Structure comprehensively. This way of systematic learning will prepare anyone easily towards Data

Structure interviews, online tests, examinations and certifications.

Highlights

- 1000+ Multiple Choice Questions & Answers in Data Structure with explanations
- Every MCQ set focuses on a specific topic in Data Structure Subject

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Who should Practice these Data Structure Questions?

- Anyone wishing to sharpen their knowledge of Data Structure Subject
- Anyone preparing for aptitude test in Data Structure
- Anyone preparing for interviews (campus/off-campus interviews, walk-in interview and company interviews)
- Anyone preparing for entrance examinations and other competitive examinations
- All Experienced, Freshers and Students

Here's list of Questions & Answers on Data Structure - Part 1 Subject covering 100+ topics:

1. Questions & Answers on Abstract Data Types

The section contains questions and answers on arrays, stacks, queues, single linked lists, doubly and circular linked lists, stacks using arrays and linked lists, queues using arrays, stacks and linked lists, priority queues and double ended queues.

Array and Array Operations

(https://www.sanfoundry.com/data-structure-

questions-answers-array-array-operations/)

Stack Operations - 1

(https://www.sanfoundry.com/data-structure-

questions-answers-stack-operations/)

Stack Operations - 2

(https://www.sanfoundry.com/data-structure-

interview-questions-answers/)

Stack Operations - 3

(https://www.sanfoundry.com/data-structure-

questions-answers-freshers/)

Queue Operations

(https://www.sanfoundry.com/data-structure-

questions-answers-queue-operations/)

Singly Linked Lists Operations – 1

(https://www.sanfoundry.com/data-structure-

interview-questions-answers-single-linked-lists/)

Singly Linked Lists Operations - 2

(https://www.sanfoundry.com/data-structure-

interview-questions-answers-freshers/)

Singly Linked Lists Operations - 3

(https://www.sanfoundry.com/data-structure-

questions-answers-experienced/)

Singly Linked Lists

(https://www.sanfoundry.com/data-structure-

questions-answers-single-linked-lists/)

Doubly Linked Lists

(https://www.sanfoundry.com/data-structure-

questions-answers-doubly-linked-lists/)

Circular Linked Lists

(https://www.sanfoundry.com/data-structure-

questions-answers-circular-linked-lists/)

Stack using Array

(https://www.sanfoundry.com/data-structure-

questions-answers-stack-array/)

Stack using Linked List

(https://www.sanfoundry.com/data-structure-

questions-answers-stack-linked-list/)

Queue using Array

(https://www.sanfoundry.com/data-structure-

questions-answers-queue-array/)

Queue using Linked List

(https://www.sanfoundry.com/data-structure-

questions-answers-queue-linked-list/)

Priority Queue (https://www.sanfoundry.com/data-

structure-questions-answers-priority-queue/)

Double Ended Queue (Dequeue)

(https://www.sanfoundry.com/data-structure-

questions-answers-double-ended-queue/)

Queue using Stacks

(https://www.sanfoundry.com/data-structure-

questions-answers-queue-using-stacks/)

Stack using Queues

(https://www.sanfoundry.com/data-structure-

questions-answers-stack-using-queues/)

2. Questions on Application of Stacks

The section contains questions on decimal to binary using stacks, towers of hanoi, expression evaluation of infix, prefix and postfix, conversions like infix to postfix, postfix to infix, prefix to infix and infix to prefix conversions, reversing the word using stack and balanced parenthesis.

Decimal to Binary using Stacks (https://www.sanfoundry.com/data-structure-interview-questions-answers-experienced/)

Evaluation of an Infix Expression (Not

Parenthesized) (https://www.sanfoundry.com/datastructure-questions-answers-evaluation-infix-

expression-not-parenthesized/)

Evaluation of a Prefix Expression

(https://www.sanfoundry.com/prefix-expression-evaluation-multiple-choice-questions-answers-mcgs/)

Evaluation of a Postfix Expression

(https://www.sanfoundry.com/postfix-expression-evaluation-multiple-choice-questions-answers-mcqs/)

Infix to Prefix Conversion

(https://www.sanfoundry.com/infix-prefixconversion-multiple-choice-questions-answersmcqs/)

Infix to Postfix Conversion

(https://www.sanfoundry.com/infix-postfix-conversion-multiple-choice-questions-answers-mcqs/)

Prefix to Infix Conversion

(https://www.sanfoundry.com/prefix-infix-conversion-multiple-choice-questions-answers-mcqs/)

Postfix to Infix Conversion

(https://www.sanfoundry.com/postfix-infix-conversion-multiple-choice-questions-answers-mcqs/)

Towers of Hanoi

(https://www.sanfoundry.com/data-structure-questions-answers-towers-hanoi/)

Reverse a Word using Stack

(https://www.sanfoundry.com/data-structurequestions-answers-reverse-word-stack/)

Balanced Parenthesis

(https://www.sanfoundry.com/balancedparenthesis-multiple-choice-questions-answersmcqs/)

3. Questions & Answers on Arrays Types

The section contains questions and answers on bit array, dynamic and parallel array, sparse and suffix array, matrix and sparse matrix.

Bit Array (https://www.sanfoundry.com/data-structure-questions-answers-bit-array/)
Dynamic Array (https://www.sanfoundry.com/data-structure-questions-answers-dynamic-array/)
Parallel Array (https://www.sanfoundry.com/data-structure-questions-answers-parallel-array/)
Sparse Array (https://www.sanfoundry.com/data-structure-questions-answers-sparse-array/)

Suffix Array (https://www.sanfoundry.com/suffixarray-multiple-choice-questions-answers-mcqs/) Matrix (https://www.sanfoundry.com/data-structurequestions-answers-matrix/) Sparse Matrix

(https://www.sanfoundry.com/sparse-matrix-multiple-choice-questions-answers-mcqs/)

4. Questions on Types of Lists

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The section contains questions on skip list, self organizing list, xor linked list and free list.

Skip List (https://www.sanfoundry.com/datastructure-questions-answers-skip-list/) Self Organizing List (https://www.sanfoundry.com/self-organizing-listmultiple-choice-questions-answers-mcqs/) Xor Linked List (https://www.sanfoundry.com/datastructure-questions-answers-xor-linked-list/) Free List (https://www.sanfoundry.com/datastructure-questions-answers-free-list/)

5. Questions & Answers on Binary Trees

The section contains questions and answers on binary trees using arrays and linked lists, preorder, postorder and inorder traversal, avl tree, binary tree properties and operations, cartesian tree, weight balanced tree, red black and splay trees, threaded binary tree and binary search trees, as tree, top tree, treap, tango tree and rope.

Binary Trees using Array (https://www.sanfoundry.com/data-structurequestions-answers-binary-trees-array/) Binary Trees using Linked Lists (https://www.sanfoundry.com/data-structurequestions-answers-binary-trees-linked-lists/) **Binary Tree Operations** (https://www.sanfoundry.com/binary-treeoperations-multiple-choice-questions-answersmcqs/) Preorder Traversal (https://www.sanfoundry.com/data-structurequestions-answers-preorder-traversal/) Postorder Traversal (https://www.sanfoundry.com/postorder-traversalmultiple-choice-questions-answers-mcgs/) Inorder Traversal (https://www.sanfoundry.com/data-structurequestions-answers-inorder-traversal/) **Binary Tree Properties** (https://www.sanfoundry.com/data-structurequestions-answers-binary-tree-properties/) Binary Search Tree (https://www.sanfoundry.com/data-structurequestions-answers-binary-search-tree/) **Balanced Binary Tree** (https://www.sanfoundry.com/balanced-binary-treemultiple-choice-questions-answers-mcqs/) Self Balancing Binary Search Tree (https://www.sanfoundry.com/self-balancingbinary-search-tree-multiple-choice-questionsanswers-mcqs/) Randomized Binary Search Tree

AA Tree (https://www.sanfoundry.com/aa-treemultiple-choice-questions-answers-mcgs/) AVL Tree (https://www.sanfoundry.com/datastructure-questions-answers-avl-tree/) Cartesian Tree (https://www.sanfoundry.com/datastructure-questions-answers-cartesian-tree/) Weight Balanced Tree (https://www.sanfoundry.com/data-structurequestions-answers-weight-balanced-tree/) Red Black Tree (https://www.sanfoundry.com/datastructure-questions-answers-red-black-tree/) Top Tree (https://www.sanfoundry.com/top-treemultiple-choice-questions-answers-mcgs/) Splay Tree (https://www.sanfoundry.com/datastructure-questions-answers-splay-tree/) Treap (https://www.sanfoundry.com/treap-multiplechoice-questions-answers-mcqs/) Threaded Binary Tree (https://www.sanfoundry.com/data-structurequestions-answers-threaded-binary-tree/) Tango Tree (https://www.sanfoundry.com/tangotree-multiple-choice-questions-answers-mcqs/) Rope (https://www.sanfoundry.com/rope-multiplechoice-questions-answers-mcqs/)

6. Questions on B-Trees

mcqs/)

The section contains questions on b tree, b+ tree and 2-3 tree.

B-Tree (https://www.sanfoundry.com/b-tree-multiple-choice-questions-answers-mcqs/)
B+ Tree (https://www.sanfoundry.com/bplus-tree-multiple-choice-questions-answers-mcqs/)

(https://www.sanfoundry.com/randomized-binary-search-tree-multiple-choice-questions-answers-

2-3 Tree (https://www.sanfoundry.com/2-3-tree-multiple-choice-questions-answers-mcqs/)

7. Questions & Answers on Trees

The section contains questions and answers on trees like ternary tree, k-ary tree, kd tree, expression tree, van emde boas tree and disjoint set data structure.

Ternary Tree - 1

(https://www.sanfoundry.com/ternary-tree-multiple-choice-questions-answers-mcqs/)

Ternary Tree - 2

(https://www.sanfoundry.com/ternary-tree-interview-questions-answers/)

K-ary Tree – 1 (https://www.sanfoundry.com/k-ary-tree-multiple-choice-questions-answers-mcqs/)

K-ary Tree – 2 (https://www.sanfoundry.com/k-ary-tree-interview-questions-answers/)

Van Emde Boas Tree

(https://www.sanfoundry.com/van-emde-boas-tree-multiple-choice-questions-answers-mcgs/)

Disjoint-Set Data Structure

(https://www.sanfoundry.com/disjoint-set-datastructure-multiple-choice-questions-answersmcqs/)

KD Tree (https://www.sanfoundry.com/kd-tree-multiple-choice-questions-answers-mcqs/)

Expression Tree

(https://www.sanfoundry.com/expression-tree-multiple-choice-questions-answers-mcqs/)

8. Questions on Heap

The section contains questions on heap, binary and weak heap, binomial and fibonacci heap, d ary heap, ternary heap, pairing and leftlist heap, skew heap, min and max heap.

Heap (https://www.sanfoundry.com/data-structure-questions-answers-heap/)

Binary Heap (https://www.sanfoundry.com/datastructure-questions-answers-binary-heap/)

Weak Heap (https://www.sanfoundry.com/datastructure-questions-answers-weak-heap/)

Binomial and Fibonacci Heap

(https://www.sanfoundry.com/data-structure-questions-answers-binomial-fibonacci-heap/)
D-ary Heap (https://www.sanfoundry.com/d-ary-heap-multiple-choice-questions-answers-mcqs/)

Ternary Heap - 1

(https://www.sanfoundry.com/ternary-heap-multiple-choice-questions-answers-mcqs/)

Ternary Heap – 2

(https://www.sanfoundry.com/ternary-heap-interview-questions-answers/)

Pairing Heap (https://www.sanfoundry.com/pairing-heap-multiple-choice-questions-answers-mcqs/)
Leftlist Heap (https://www.sanfoundry.com/leftlist-heap-multiple-choice-questions-answers-mcqs/)
Skew Heap (https://www.sanfoundry.com/skew-heap-multiple-choice-questions-answers-mcqs/)
Min/Max Heap (https://www.sanfoundry.com/min-max-heap-multiple-choice-questions-answers-mcqs/)

9. Questions & Answers on Trie

The section contains questions and answers on trie and suffix tree.

Trie (https://www.sanfoundry.com/trie-multiplechoice-questions-answers-mcqs/) Suffix Tree – 1 (https://www.sanfoundry.com/suffix-

tree-multiple-choice-questions-answers-mcqs/)

Suffix Tree -1 (https://www.sanfoundry.com/suffix-tree-interview-questions-answers/)

10. Questions on Hash Tables

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The section contains questions on hash tables, direct addressing tables, hash tables chaining using linked lists, hash tables with linear and quadratic probing, hashing functions, hash tree, min hash and double hashing.

Hash Tables (https://www.sanfoundry.com/datastructure-questions-answers-hash-tables/) Hash Tables Chaining using Linked Lists (https://www.sanfoundry.com/hash-tableschaining-linked-lists-multiple-choice-questionsanswers-mcqs/) Hash Tables with Linear Probing (https://www.sanfoundry.com/hash-tables-linearprobing-multiple-choice-questions-answers-mcqs/) Hash Tables with Quadratic Probing (https://www.sanfoundry.com/hash-tablesquadratic-probing-multiple-choice-questionsanswers-mcqs/) **Hashing Functions** (https://www.sanfoundry.com/hashing-functionsmultiple-choice-questions-answers-mcqs/)

Double Hashing

(https://www.sanfoundry.com/double-hashing-multiple-choice-questions-answers-mcqs/)
Hash Tree (https://www.sanfoundry.com/hash-tree-multiple-choice-questions-answers-mcqs/)
Min Hash (https://www.sanfoundry.com/min-hash-multiple-choice-questions-answers-mcqs/)
Direct Addressing Tables
(https://www.sanfoundry.com/data-structure-questions-answers-direct-addressing-tables/)

11. Questions & Answers on Graph

The section contains questions and answers on graph, adjacency matrix, incidence matrix, adjacency list, directed and undirected graph, directed acyclic graphs, multigraph and hypergraph, binary decision diagrams & and-inverter graph.

Graph (https://www.sanfoundry.com/data-structure-questions-answers-graph/)
Adjacency Matrix
(https://www.sanfoundry.com/data-structure-questions-answers-adjacency-matrix/)
Incidence Matrix and Graph Structured Stack
(https://www.sanfoundry.com/data-structure-questions-answers-incidence-matrix-graph-structured-stack/)
Adjacency List (https://www.sanfoundry.com/data-structure-questions-answers-adjacency-list/)
Undirected Graph
(https://www.sanfoundry.com/data-structure-questions-answers-undirected-graph/)

Directed Graph (https://www.sanfoundry.com/data-structure-questions-answers-directed-graph/)
Directed Acyclic Graph
(https://www.sanfoundry.com/data-structure-questions-answers-directed-acyclic-graph/)
Propositional and Directed Acyclic Word Graph (https://www.sanfoundry.com/data-structure-questions-answers-propositional-directed-acyclic-word-graph/)
Multigraph and Hypergraph
(https://www.sanfoundry.com/data-structure-questions-answers-multigraph-hypergraph/)
Binary Decision Diagrams & And Inverter Graph (https://www.sanfoundry.com/data-structure-questions-answers-test/)

If you would like to learn Data Structure thoroughly, you should attempt to work on the complete set of questions and answers mentioned above. It will immensely help anyone trying to crack an exam or an

interview.

Here's the list of Best Reference Books in Data Structure (https://www.sanfoundry.com/best-reference-books-data-structure-algorithms/).

Wish you the best in your endeavor to learn and master Data Structure!

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Deep Dive @ Sanfoundry:

- 1. C Programming Examples without using Recursion (https://www.sanfoundry.com/c-programming-examples-without-using-recursion/)
- 2. Python Programming Examples on Trees (https://www.sanfoundry.com/python-programming-examples-trees/)
- 3. C Programming Examples (https://www.sanfoundry.com/c-programming-examples/)
- 4. Python Programming Examples on Linked Lists (https://www.sanfoundry.com/python-programming-examples-linked-lists/)
- 5. C Programming Examples on Linked List (https://www.sanfoundry.com/c-programming-examples-linked-list/)
- 6. Java Algorithms, Problems & Programming Examples (https://www.sanfoundry.com/1000-java-algorithms-problems-programming-examples/)
- 7. Data Structure Questions and Answers Threaded Binary Tree (https://www.sanfoundry.com/data-structure-questions-answers-threaded-binary-tree/)
- 8. Data Structure Questions and Answers Binary Trees using Linked Lists (https://www.sanfoundry.com/data-structure-questions-answers-binary-trees-linked-lists/)
- 9. C# Programming Examples on Data Structures (https://www.sanfoundry.com/csharp-programming-examples-on-datastructures/)
- 10. Self Balancing Binary Search Tree Multiple Choice Questions and Answers (MCQs) (https://www.sanfoundry.com/self-balancing-binary-search-tree-multiple-choice-questions-answers-mcqs/)



Are You as Tech Savvy as You Think?

0/10 SCORE

In Saudi Arabia, hacking is punished with the removal of one of the offender's hands





FALSE

Get your high blood pressure to a healthy range...









Manish Bhojasia (https://in.linkedin.co m/in/manishbhojasia ?trk=profile-badgename)

Founder & CTO

Sanfoundry

(https://www.linkedin.com/company/sanfoundry?trk=profile-badge-company)

View profile (https://in.linkedin.cinin/manishhheiasiaនាក្រស់ប្រកាស្ត្រមានប្រជាព្រះ

Manish Bhojasia (https://www.sanfoundry.com/about/), a technology veteran with 20+ years @ Cisco & Wipro, is Founder and CTO at Sanfoundry. He is Linux Kernel Developer & SAN Architect and is passionate about competency developments in these areas. He lives in Bangalore and delivers focused training sessions to IT professionals in Linux Kernel, Linux Debugging, Linux Device Drivers, Linux Networking, Linux Storage, Advanced C Programming, SAN Storage Technologies, SCSI Internals & Storage Protocols such as iSCSI & Fiber Channel. Stay connected with him @ LinkedIn (https://www.linkedin.com/in/manishbhoiasia) Facebook Twitter

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Best Careers

Developer Tracks (https://www.sanfoundry.com/salary-50l/)

SAN Developer (https://www.sanfoundry.com/san-storage-developer-training-courses/)

Linux Kernel Developer (https://www.sanfoundry.com/linux-kernel-developer-training-courses-jobs/)

Linux Driver Developer (https://www.sanfoundry.com/linux-device-driver-developer-training/)

Linux Network Developer (https://www.sanfoundry.com/linux-network-developer-training/)

Live Training Photos (https://www.sanfoundry.com/sanfoundry-classes/)

Mentoring (https://www.sanfoundry.com/professional-mentoring-coaching-career-guidance-cto/)

Software Productivity (https://www.sanfoundry.com/programming-discipline-and-software/)

GDB Assignment (https://www.sanfoundry.com/gdb-example-tutorial/)

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Motorola, Ericsson, Aricent, HP, Intuit, Microsoft, Cisco, SAP Labs, Siemens, Symantec, Redhat, Chelsio, Cavium, ST-Micro, Samsung, LG-Soft, Wipro, TCS, HCL, IBM, Accenture, HSBC, Mphasis, Tata-Elxsi, Tata VSNL, Mindtree, Cognizant and Startups.	
	Best Trainings

SAN I - Technology (https://www.sanfoundry.com/san-storage-area-networks-training/)

SAN II - Admin (https://www.sanfoundry.com/san-administration-training-course/)

Linux Fundamentals (https://www.sanfoundry.com/linux-administration-training/)

Advanced C Training (https://www.sanfoundry.com/advanced-c-programming-training/)

Linux-C Debugging (https://www.sanfoundry.com/training-on-linux-debugging-techniques/)

System Programming (https://www.sanfoundry.com/training-on-linux-internals-systems/)

Network Programming (https://www.sanfoundry.com/training-socket-network-programming/)

Bastx Reference: Rooks Infoundry.com/training-multithreaded-parallel/)

Kernel Programming (https://www.sanfoundry.com/linux-kernel-internals-training/)

Ckarpate subsince (Black & Whipsan word indxy keonal best முறை by the computer-science-engineering/)

Algionxina vice program (https://www.staniooodny.toum/bestanieresce-books-programming-hot-

technologies)

Electronics Engineering Books (https://www.sanfoundry.com/best-reference-books-electrical-electronics-engineering/)

Electrical Engineering Books (https://www.sanfoundry.com/best-reference-books-electrical-electronics-engineering/)

Chemical Engineering Books (https://www.sanfoundry.com/best-reference-books-chemical-engineering/)

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Industrial Engineering Books (https://www.sanfoundry.com/best-reference-books-industrial-engineering-operations-research/)

Instrumentation Engg Books (https://www.sanfoundry.com/best-reference-books-instrumentation-engineering/) Metallurgical Engineering Books (https://www.sanfoundry.com/best-reference-books-metallurgical-engineering/) All Stream Best Books (https://www.sanfoundry.com/best-reference-books-tech-engineering-sciences/)

Questions and Answers

1000 C Questions & Answers (https://www.sanfoundry.com/c-interview-questions-answers/)

1000 C++ Questions & Answers (https://www.sanfoundry.com/cplusplus-interview-questions-answers/)

1000 C# Questions & Answers (https://www.sanfoundry.com/1000-csharp-guestions-answers/)

1000 Java Questions & Answers (https://www.sanfoundry.com/java-questions-answers-freshers-experienced/)

1000 Linux Questions & Answers (https://www.sanfoundry.com/technical-interview-questions/)

1000 Python Questions (https://www.sanfoundry.com/1000-python-questions-answers/)

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1000 Hadoop Questions (https://www.sanfoundry.com/1000-hadoop-questions-answers/)

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All Stream Questions & Answers (https://www.sanfoundry.com/)

India Internships

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Developers Track (https://www.sanfoundry.com/salary-50l/)

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Contact Us (https://www.sanfoundry.com/contact/)

Sitemap (https://www.sanfoundry.com/sitemap index.xml)

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