

# USM's Shriram Mantri Vidyanidhi Info Tech Academy

### Data Structure Assignments \_1 Feb 20

- 1. What are Data Structures?
- 2. What is the difference between a File Structure and a Data Structure?
- 3. What is a linked list?
- 4. Where are Data Structures primarily used?
- 5. What are the types of searching used in Data Structures?
- 6. How does binary search work?
- 7. How are individual elements accessed in an array?
- 8. What is a queue in Data Structures?
- 9. What is a binary tree?
- 10. What is the meaning of stack?
- 11. What is the working of LIFO?
- 12. What are multi-dimensional arrays?
- 13. Are linked lists Linear or Non-linear Data Structures?
- 14. What is a Binary Search Tree?
- 15. What is the meaning of FIFO?
- 16. What is the difference between void and null in Data Structures?
- 17. What is dynamic memory management?
- 18. What are push and pop operations in Data Structures?
- 19. How is a variable stored in memory when using Data Structures?
- 20. What is merge sort?
- 21. Why should heap be used over a stack?
- 22. What is the meaning of Data Abstraction?
- 23. What is the meaning of a post-fix expression in Data Structures?
- 24. What is the working of a selection sort?

# Shriram Muntri

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- 25. What are signed numbers in Data Structures?
- 26. What are the minimum nodes binary trees can have?
- 27. What Data Structures make use of pointers?
- 28. What is the use of dynamic Data Structures?
- 29. What is a priority queue?
- 30. Pointers allocate memory for data storage. True or False?
- 31. What is the meaning of deque?
- 32. State the difference between Linear and Non-linear Data Structures.
- 33. What is the meaning of an AVL tree?
- 34. How does Huffman's algorithm work?
- 35. What are recursive algorithms?
- 36. How does bubble sort work?
- 37. Which is the fastest sorting algorithm available?
- 38. What is the postfix form of: (X + Y) \* (Z C)
- 39. Where are Tree Data Structures used?
- 40. What are the Data Structures that are used in graphs?
- 41. What are the Data Structures that are used in DFS and BFS algorithms?
- 42. What are the time complexities of linear search and binary search?
- 43. Where are Multi-linked Data Structures used?
- 44. What is the method used for inorder traversal in trees?
- 45. What is the working of post-order traversal in trees?
- 46. What are the disadvantages of implementing queues using arrays?
- 47. How can elements be inserted in the circular queue?
- 48. What is the use of void pointers?



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- 49. What is the meaning of the stack overflow condition?
- 50. Have you earned any sort of certification to boost your Data Structures learning?

