Data Structure

Question Paper ID:	qp_768a3e89
Total Marks:	60
Total Questions:	21
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Instructions:

• This question paper contains 21 questions worth 60 marks.
• Answer all questions in the space provided.
• Write clearly and legibly.
• Use of calculators/mobile phones is not permitted unless specified.

Multiple Choice Questions (10 × 1 marks)

Q1. Which of the following is related to LISTS? *[1 mark]* (Unit: LISTS)

A) Abstract Data Types (ADTs)
B) Array-based implementation
C) None of the above
D) All of the above

Q2. Which of the following is related to MULTIWAY SEARCH TREES AND GRAPHS? *[1 mark]* (Unit: MULTIWAY SEARCH TREES AND GRAPHS)

A) Graph Definition
B) Representation of Graphs
C) None of the above
D) All of the above

Q3. Which of the following is related to TREES? *[1 mark]* (Unit: TREES)

A) Tree Traversals
B) Binary Tree ADT
C) None of the above
D) All of the above

Q4. Which of the following is related to STACKS AND QUEUES? *[1 mark]* (Unit: STACKS AND QUEUES)

A) Applications
B) Balancing Symbols
C) None of the above
D) All of the above

Q5. Which of the following is related to STACKS AND QUEUES? *[1 mark]* (Unit: STACKS AND QUEUES)

A) Applications
B) Balancing Symbols
C) None of the above
D) All of the above

Q6. Which of the following is related to TREES? *[1 mark]* (Unit: TREES)

A) Tree Traversals
B) Binary Tree ADT
C) None of the above
D) All of the above

Q7. Which of the following is related to SEARCHING, SORTING AND HASHING TECHNIQUES? *[1 mark]* (Unit: SEARCHING, SORTING AND HASHING TECHNIQUES)

A) Linear Search
B) Binary Search. Sorting
C) None of the above
D) All of the above

Q8. Which of the following is related to LISTS? *[1 mark]* (Unit: LISTS)

A) Abstract Data Types (ADTs)
B) Array-based implementation
C) None of the above
D) All of the above

Q9. Which of the following is related to MULTIWAY SEARCH TREES AND GRAPHS? *[1 mark]* (Unit: MULTIWAY SEARCH TREES AND GRAPHS)

A) Graph Definition
B) Representation of Graphs
C) None of the above
D) All of the above

Q10. Which of the following is related to SEARCHING, SORTING AND HASHING TECHNIQUES? *[1 mark]* (Unit: SEARCHING, SORTING AND HASHING TECHNIQUES)

A) Linear Search
B) Binary Search. Sorting
C) None of the above
D) All of the above

Descriptive Questions (4 × 5 marks)

Q11. Explain the key concepts covered in LISTS. Topics include: Abstract Data Types (ADTs), Array-based implementation, Linked list implementation *[5 marks]* (Unit: LISTS)

Q12. Explain the key concepts covered in MULTIWAY SEARCH TREES AND GRAPHS. Topics include: Graph Definition, Representation of Graphs, Types of Graph *[5 marks]* (Unit: MULTIWAY SEARCH TREES AND GRAPHS)

Q13. Explain the key concepts covered in TREES. Topics include: Tree Traversals, Binary Tree ADT, Expression trees *[5 marks]* (Unit: TREES)

Q14. Explain the key concepts covered in STACKS AND QUEUES. Topics include: Applications, Balancing Symbols, Evaluating arithmetic expressions- Infix to Postfix conversion *[5 marks]* (Unit: STACKS AND QUEUES)

Essay Questions (2 × 10 marks)

Q15. Explain the key concepts covered in LISTS. Topics include: Abstract Data Types (ADTs), Array-based implementation, Linked list implementation *[10 marks]* (Unit: LISTS)

Q16. Explain the key concepts covered in STACKS AND QUEUES. Topics include: Applications, Balancing Symbols, Evaluating arithmetic expressions- Infix to Postfix conversion *[10 marks]* (Unit: STACKS AND QUEUES)

Short Answer Questions (5 × 2 marks)

Q17. Explain the key concepts covered in LISTS. Topics include: Abstract Data Types (ADTs), Array-based implementation, Linked list implementation *[2 marks]* (Unit: LISTS)

Q18. Explain the key concepts covered in STACKS AND QUEUES. Topics include: Applications, Balancing Symbols, Evaluating arithmetic expressions- Infix to Postfix conversion *[2 marks]* (Unit: STACKS AND QUEUES)

Q19. Explain the key concepts covered in MULTIWAY SEARCH TREES AND GRAPHS. Topics include: Graph Definition, Representation of Graphs, Types of Graph *[2 marks]* (Unit: MULTIWAY SEARCH TREES AND GRAPHS)

Q20. Explain the key concepts covered in SEARCHING, SORTING AND HASHING TECHNIQUES. Topics include: Linear Search, Binary Search. Sorting, Bubble sort *[2 marks]* (Unit: SEARCHING, SORTING AND HASHING TECHNIQUES)

Q21. Explain the key concepts covered in TREES. Topics include: Tree Traversals, Binary Tree ADT, Expression trees *[2 marks]* (Unit: TREES)