

Second CIA Exam

Class: BCA-II Sem

Date: 26.05.2025

Subject: Data Structure (CASC-06T)

Max Mark: 20

(Solve each question from section)

Section A: (Objective Types)

(Marks 4)

Q1. What is a data structure?

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|-------------------------------------|--------------------------------|
| A. A programming language | B. A collection of algorithms |
| C. A way to store and organize data | D. A type of computer hardware |

Q2. Which data structure is used for implementing recursion?

- | | |
|----------|----------|
| A. Stack | B. Queue |
| C. List | D. Array |

Q3. The data structure required for Breadth First Traversal on a graph is?

- | | |
|----------|----------|
| A. Array | B. Stack |
| C. Tree | D. Queue |

Q4. The prefix form of $A-B/(C * D ^ E)$ is?

- | | |
|--------------------|--------------------|
| A. $-A/B * C ^ DE$ | B. $-A/BC * ^ DE$ |
| C. $-ABCD * ^ DE$ | D. $- / * ^ ACBDE$ |

Section B: (Short Descriptive Answer)

(Marks 6)

Q5. What is data structure? Write the applications of Data Structure?

Q6. What is Non-linear Data structure? Explain its types?

Q7. What is Stack? What are different operations available in stack data structure?

Section C: Solve Any 2 (Long Descriptive Answer)

(Marks 10)

Q8. What is Queue? How many types of queue? What are different operations available in stack data structure?

Q9. What is a linked list data structure? Write the different operations and applications for the Linked list?

Q10. Differentiate between stack and queue data structure.