

Crimson College of Technology
Internal Exam

Level: Bachelor
Programme: BCIS VI
Course: DSA

Year: 2025
Full Marks: 50
Time: 2:00 Hrs

Candidates are required to give their answers in their own words as practical as possible. The figures in margin indicate full marks.

Attempt all questions.

Section "A"

Short Answer Questions

(2*5=10)

1. What is Data structure? Explain ADT.
2. Explain an array and compare it with the link list in detail.

Section "B"

Descriptive Questions

(3*10=30)

3. Explain Binary tree, Binary Search tree and AVL Tree. Construct an AVL tree 21, 26, 30, 9, 4, 14, 28, 18, 15, 10, 2, 3, 7
4. What is Queue? Write an algorithm to insert and display the data in the queue.
5. What is a Linked list? Explain singular and double linked lists.

Section "C"

Long answer questions.

(1*10=10)

6. What is Stack? Explain push and pop operation of the stack with sample code.