

B.C.A Semester - 2 (CBCS) Examination
March/April – 2026 (New Course)
Data Structure & File Structure using C (CORE)

Time: 2:30 Hours**Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

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- Que.1(A) Answer the following questions. (03)
1. Explain Time Complexity
 2. Explain Space Complexity.
 3. What do you mean by Entity?
- Que.1(B) Answer the following questions. (Any Two) (06)
1. Explain Data Type in Brief.
 2. Explain Structure in brief with suitable example.
 3. Write an algorithm for selection sort.
 4. Write a program for bubble sort.
- Que.1(C) Answer the following question. (Any One) (05)
1. Explain all the types of arrays in brief.
 2. Explain pointer with suitable example.
- Que.2(A) Answer the following questions. (03)
1. Full form of TOS.
 2. What is Front & rear in Queue?
 3. Full form of LIFO.
- Que.2(B) Answer the following questions. (Any Two) (06)
1. Write and Algorithm for push() and pop() of Dynamic Stack.
 2. Write a code for insert() and delete() of static Queue.
 3. Explain the all the operation of Stack.
 4. Explain all the of operation of Double Ended Queue.
- Que.2(C) Answer the following question. (Any One) (05)
1. Explain all the polish Expression in brief.
 2. Explain all the operation of Queue in brief.
- Que.3(A) Answer the following questions. (03)
1. Explain Node.
 2. What is the use of info block in link-list?
 3. Explain why the name is specified singly Link-List.
- Que.3(B) Answer the following questions. (Any Two) (06)
1. Write and algorithm for insert first & Insert Last in Doubly Link List.
 2. Write down the Code for insert by value and insert by position in doubly link list.
 3. Write an algorithm for insert first & Insert Last in Singly Link List.
 4. Explain Doubly Link List in brief with possible Operation which we can perform with it.
- Que.3(C) Answer the following question. (Any One) (05)
1. Explain Dynamic Memory Allocation in brief.
 2. Explain Singly Link List in brief with possible operation which can be performed with it.
- Que.4(A) Answer the following questions. (03)
1. Explain Leaf Node.
 2. Explain rule for Pre Order Traversal.
 3. What do you mean by Sibling Node?

- Que.4(B) Answer the following questions. (Any Two) (06)
1. Explain all the types of Graphs in brief
 2. Explain all the type of tree in brief.
 3. Explain the Shortest Path problem in graph.
 4. Explain Terminology of Tree in brief.
- Que.4(C) Answer the following question. (Any One) (05)
1. Explain tree traversal method in brief.
 2. Explain Graph Traversal method in brief.
- Que.5(A) Answer the following questions. (03)
1. Full form of FAT.
 2. Full form of NTFS.
 3. What do you mean by Record?
- Que.5(B) Answer the following questions. (Any Two) (06)
1. Explain Tree Structured Directory in brief.
 2. Explain FAT in brief.
 3. Explain NTFS in Brief.
 4. What do you mean by Indexing in brief.
- Que.5(C) Answer the following question. (Any One) (05)
1. Explain Hashing in brief.
 2. Explain Index Sequential File in brief.
