

B.C.A Semester - 2 (CBCS) Examination
March/April – 2025 (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.

Que.1 (A)	Give Answers of following Questions.	(03)
	1) Define Data Item.	
	2) What is Primitive data type?	
	3) Define File.	
Que.1 (B)	Attempt the following (Any Two)	(06)
	1) Explain one dimensional Array.	
	2) Explain pointer with example.	
	3) Write down algorithm of Linear Search.	
	4) Write down algorithm of Binary Search.	
Que.1 (C)	Attempt the following (Any one)	(05)
	1) Linear Vs. Non-linear data structure.	
	2) Explain Bubble sort with example.	
Que.2 (A)	Give Answers of following Questions.	(03)
	1) Define Queue.	
	2) List out stack operation.	
	3) List out queue operation.	
Que.2 (B)	Attempt the following (Any Two)	(06)
	1) List out stack applications. Explain any two.	
	2) Explain Circular Queue..	
	3) Explain any one operation in Queue.	
	4) Explain prefix and postfix.	
Que.2 (C)	Attempt the following (Any one)	(05)
	1) Explain Double ended Queue.	
	2) Explain Stack Operations in detail	
Que.3 (A)	Give Answers of following Questions.	(03)
	1) Full form of DMA.	
	2) Define malloc().	
	3) What is traversing?	
Que.3 (B)	Attempt the following (Any Two)	(06)
	1) Explain linked list as Stack.	
	2) Explain concept of doubly linked list.	
	3) Explain Dynamic Memory Allocation.	
	4) Explain Insertion of first node in the linked list.	
Que.3 (C)	Answer any one Question.	(05)
	1) Write an algorithm to delete first node in linked list.	
	2) Write an algorithm to delete last node in linked list.	
Que.4 (A)	Give Answers of following Questions.	(03)
	1) Define Graph.	
	2) Full form of BFS	
	3) Define binary Tree.	

- Que.4 (B) Attempt the following (Any Two) (06)
- 1) Explain Depth First Search.
 - 2) Explain in-order traversal tree.
 - 3) Explain Spanning Trees.
 - 4) Explain shortest path.
- Que.4 (C) Attempt the following (Any one) (05)
- 1) Explain tree with example.
 - 2) Explain types of graph in brief.
- Que.5 (A) Give Answers of following Questions. (03)
- 1) Full form of FAT.
 - 2) Full form of NTFS.
 - 3) Full form of DOS.
- Que.5 (B) Attempt the following (Any one) (06)
- 1) Explain Hashing.
 - 2) Explain concept of fields and files.
 - 3) Define File System Services in brief.
 - 4) Explain Disk Space Allocation.
- Que.5 (C) Attempt the following (Any one) (05)
- 1) Write note on Indexes.
 - 2) Write note on Sequential file.
