Data Structure – Modal Question Paper

Solve this paper and also write question with answer in assignment book

Que-1		
A)	**Attempt the following:**	**3**
1)	List different linear data structures.	
2)	What is structure?	
3)	What is record?	
B)	**Answer the following (Any two)**	**6**
1)	Explain characteristics of a data structure.	
2)	What is pointer? Explain declaration and initialization of pointer.	
3)	Write an algorithm **or** C function to sort an array using bubble sort technique.	
4)	Write an algorithm **or** C function to search an element using sequential or linear search technique.	
C)	**Attempt the following (Any one)**	**5**
1)	Explain different types of data structure in brief.	
2)	Explain basic terminology of a data structure.	
Que-2		
A)	**Attempt the following:**	**3**
1)	Stack works as _____ method	
2)	Full form of FCFS is _____.	
3)	DEQUE stands for _____.	
B)	**Answer the following (Any two)**	**6**
1)	Explain priority queue.	
2)	Write an algorithm or C function to push an element in a stack.	
3)	Explain applications of stack.	
4)	Write an algorithm or C function to delete a value from a queue.	
C)	**Attempt the following (Any one)**	**5**
1)	Explain polish expression and reverse polish expression	
2)	Write algorithms or C functions for insert and delete operations on circular queue	
Que-3		
A)	**Attempt the following:**	**3**
1)	What is dynamic memory allocation?	
2)	What is node?	
3)	_____ function is used to release memory.	
B)	**Answer the following (Any two)**	**6**
1)	Explain different memory management functions.	
2)	Explain applications of linked list.	
3)	Explain merging of linked list.	
4)	What is linked list? Explain different types of linked list in brief.	
C)	**Attempt the following (Any one)**	**5**
1)	Write algorithms or C functions to insert first node and delete last node in a Singly linked list.	
2)	Write algorithms or C functions to delete first node and insert last node in a Singly linked list.	
Que-4		
A)	**Attempt the following:**	**3**
1)	What is graph?	

2)	Full form of DFS is _____	
3)	BST stands for _____	
B)	**Answer the following (Any two)**	**6**
1)	What is tree? Explain binary tree.	
2)	Explain complete binary tree.	
3)	Explain spanning tree.	
4)	Explain shortest path problem.	
C)	**Attempt the following (Any one)**	**5**
1)	Write algorithms or C functions for binary tree traversal.	
2)	Explain graph traversal techniques.	
Que-5		
A)	**Attempt the following:**	**3**
1)	Full form of FAT is _____.	
2)	What is hashing?	
3)	What is file organization?	
B)	**Answer the following (Any two)**	**6**
1)	Explain different file system services	
2)	Write a short note on FAT file system.	
3)	Explain tree-structured directory structure.	
4)	Explain the concept of field, record and file	
C)	**Attempt the following (Any one)**	**5**
1)	Explain sequential file organization in detail.	
2)	Write a short note on linear hashing.	

ALL THE BEST