Data structure

DURATION: - 2½ hrs | 833191024 | MARKS:- 75

Note: - (1) All questions are compulsory.
(2) Figures to the right indicate full marks
(3) Answer to each question must being on a new page

Q1		**Attempt any Four of the following**	20M
	A	What is Linked List? Explain types of ADT of linked List.	CO1-R
	B	How to insert new node at ending of the Linked List?	CO2-A
	C	How to use Stack for balanced delimiter? Explain with suitable example.	CO2-A
	D	Write a program to insert and delete from queue data structure	CO3-C
	E	What is Stack ? what are different advantages and disadvantages of it.	CO1-A/R
	F	Explain the terms: a) Enqueue b) Dequeue.	CO2-E
Q2		**Attempt any Four of the following**	20M
	A	Write a short note on Balanced BST.	CO1-R
	B	What is doubly linked list? State its advantages and disadvantages.	CO2-R
	C	Consider the following string: ABCADFABAEF and Find the code using Haffman algorithm.	CO3-E

symbol	A	B	C	D	E	F
frequency	4	2	1	1	1	2

	D	What are different advantages and disadvantages of priority Queue.	CO2-R
	E	How to delete any node from doubly Linked list from beginning.	CO1-R
	F	What is Priority Queue? Explain its Applications	CO2-U
Q3		**Attempt any Four of the following**	20M
	A	Explain the Hashing methods in details,	CO2-U
	B	What is Hashing? What are the different components of hashing?	CO2-R
	C	Write short note on collision resolution techniques.	CO2-U
	D	What is Graph? What are different types of Graph.	CO2-R
	E	Write a program to demonstrate DFS using adjacency matrix	CO3-A
	F	Explain BFS algorithm using suitable example.	CO2-U
Q4		**Attempt any Five of the following**	15M
	A	What is Single Liked List?	CO1-R/U
	B	What is reverse Polish Notation?	CO2-R
	C	What is AVL Tree?	CO2-R
	D	What are different techniques of Graph?	CO2-R
	E	Write a characteristics good Hash function.	CO2-R
	F	Explain the separate Chaining.	CO2-R/U

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