

Design and Analysis of Algorithms

Summer 2020, Final Semester

Instructor: **Muhammad Adil** Asst. Prof. Total Marks: 50

Note: Attempt all questions.

Q	Part	Question	Marks															
1	a	How would you be defining a Linked List?	05															
	b	Design a Diagrammatic One Way Linked List for the given data.	15															
		<table border="1" style="width: 100%; border-collapse: collapse; margin-left: 40px;"> <thead> <tr> <th style="width: 25%;">Node#</th> <th style="width: 25%;">Node Address</th> <th style="width: 50%;">Node Data</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">200</td> <td style="text-align: center;">D</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1000</td> <td style="text-align: center;">A</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;">1350</td> <td style="text-align: center;">T</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">6700</td> <td style="text-align: center;">E</td> </tr> </tbody> </table>	Node#	Node Address	Node Data	1	200	D	2	1000	A	3	1350	T	4	6700	E	
Node#	Node Address	Node Data																
1	200	D																
2	1000	A																
3	1350	T																
4	6700	E																
2		Apply Breadth-First Technique on the given Tree. <div style="text-align: center; margin-top: 20px;"> <pre> graph TD A((A)) --> M((M)) A --> L((L)) M --> D((D)) M --> J((J)) L --> E((E)) L --> K((K)) J --> H((H)) </pre> </div>	15															
3		App Depth-First Search on the graph given in Q#2.	15															