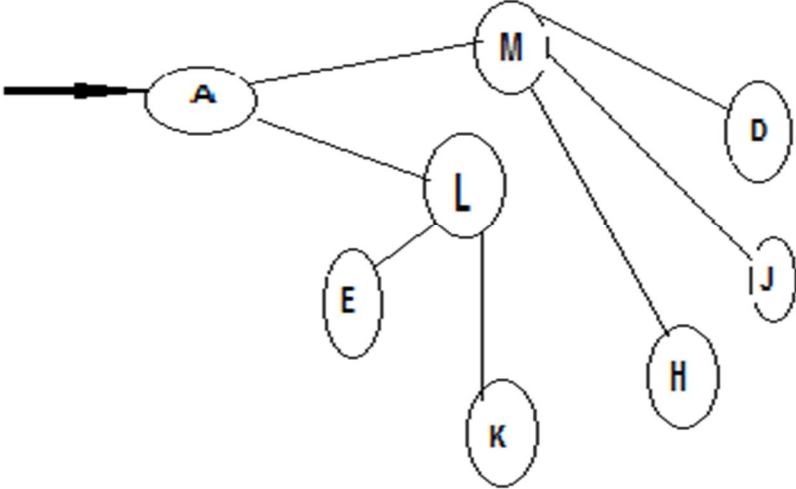


**Design and Analysis of Algorithms**  
 Spring 2020, Mid-Semester Assignment  
 Instructor: **Muhammad Adil** Asst. Prof. Total Marks: 30

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. <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Node#</th> <th>Node Address</th> <th>Node Data</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3067</td> <td>A</td> </tr> <tr> <td>2</td> <td>4500</td> <td>B</td> </tr> <tr> <td>3</td> <td>2320</td> <td>C</td> </tr> <tr> <td>4</td> <td>1980</td> <td>D</td> </tr> </tbody> </table>	Node#	Node Address	Node Data	1	3067	A	2	4500	B	3	2320	C	4	1980	D
Node#	Node Address	Node Data															
1	3067	A															
2	4500	B															
3	2320	C															
4	1980	D															
2		Apply Depth-First Technique on the given Tree.  <pre> graph TD     A((A)) --&gt; M((M))     A --&gt; L((L))     M --&gt; D((D))     M --&gt; H((H))     M --&gt; J((J))     L --&gt; E((E))     L --&gt; K((K))             </pre>	15														
3		How would You be defining a Queue? Give some real life examples of Queues.	05														