Data structure-5

SL NO	QUESTIONS
1	What is the modulus operator used for with respect to circular queues?
	The modulus operator can be used to make a linear pattern into a circular pattern. When the last element is used up, the modulus operator will take you back to the first element.
2	When would you implement a queue using a linked list instead of an array?
	When you don't know the number of nodes ahead of time. The linked list implementation is only limited by the amount of memory on the machine.
3	What is the action called to place data on a queue?
	Enqueue
4	What is the action called to remove data from a queue?
	Dequeue
5	Applications of Queue Data Structure?
	• Queue is used when things don't have to be processed immediately, but have to be processed in First In First Out order like Breadth First Search. This property of Queue makes it also useful in following kind of scenarios. • When a resource is shared among multiple consumers. Examples include CPU scheduling, Disk Scheduling. • When data is transferred asynchronously (data not necessarily received at same rate as sent) between two processes. Examples include IO Buffers, pipes, file IO, etc. • BFS traversal of Tree • BFS traversal of Graph • Finding shorted path
6	Using which algorithm we can get minimum spanning tree from a given graph?
	Kruskal & Prime algorithm
7	What is a binary tree?
	A binary tree is a finite set of nodes where each node has at most two children, that is either empty or consists of a root or two disjoint binary trees called the left sub-tree and the right sub-tree.
8	What is the node in a binary tree called that spawns another node?
	A parent node spawns another node in a binary tree.
9	If you have 1,000 nodes in a balanced binary tree, approximately how many comparisons do you need to do to find a particular node?
	Ten. 1024=2^10 > 1000.
10	How is the maximum depth of a tree defined?
	The depth is the number of hops to get to the "lowest" node in the tree.