GLS UNIVERSITY
FACULTY OF COMPUTER APPLICATIONS AND INFORMATION TECHNOLOGY
BCA SEM III
Data Structure
Theory Assignment – 1

Q-1	**Fill In the Blanks.**
1.	Data is a _____ .
2.	Age: 22 is _____ (Data or Information)
3.	_____ are the most convenient way to handle data of different types.
4.	_____ is the collection of node.
5.	Tree and graph are the example of____ data structure.
6.	ADT is an abbreviation of ____ .
7.	If most of the elements of the matrix have 0 value, then it is called ____matrix.
8.	_____ data type are like user defined data type.
9.	All elements are arranged in non sequence is known as _____ .
10.	A square matrix whose all elements above the main diagonal are zero is called _____ .
Q-2	**True or False**
1.	An array is linear data structure.
2.	The smallest element of an arrays index is called its lower bound.
3.	A matrix which contain most of non zero elements is called sparse matrix.
4.	Matrix represent the use of two dimensional array.
5.	Data can be organized in a linear or non-linear form.
6.	In linear data structure all the data elements are arranged in a particular sequence.
7.	Data structures are a method of representing of logical relationships between individual data elements related to the solution of a given problem.
8.	int, string, characters are known as primitive data types.
9.	Linked list is non linear data structure
10.	In diagonal matrix all diagonal elements must be a non zero.
Q-3	**Answer the following questions.**
1.	Write a note on Classification Data Structure with diagram.
2.	Differentiate Linear vs Non-Linear Data Structure.
3.	Write a note on Primitive Datatype.
4.	Write a note on Non-Primitive Datatype.
5.	Differentiate Datatype vs Data Structure.
6.	What is an array? How to declare and initialize an array?
7.	What is Sparse Matrix? How to represent it in Triplet array?
8.	Define the following terms: Stack, Queue, Array, Linked List, Graph, Tree