

DARJEELING POLYTECHNIC  
1<sup>ST</sup> INTERNAL EXAM 2021  
CST-2<sup>nd</sup> Year-3<sup>rd</sup> Semester

SUBJECT: DATA STRUCTURE

F.M. : 20  
TIME: 45 mins.

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A) Answer any five questions: (1×5=5)

1. The logical and mathematical model of a particular organization of data is called \_\_\_\_\_.
2. LIFO stands for \_\_\_\_\_.
3. FIFO stands for \_\_\_\_\_.
4. BST stands for \_\_\_\_\_.
5. ADT stands for \_\_\_\_\_.
6. Time complexity of bubble sort in worst case. \_\_\_\_\_.

B) Answer any ONE question: (1×10=10)

1. What do you mean by Array? Explain the difference between Linear and Non Linear data structure? What do you mean by Data Structure? Explain. (3+4+3)
2. What is an Algorithm? Define Big Oh, omega, theta. Define Flowchart. [10]

C) Write a short note on the following. (Any Two)[ $2 \times 2\frac{1}{2}=5$ ]

- i. Bubble Sort
- ii. Stack.
- iii. Binary Tree.
- iv. Linked list