

Metropolitan University, Sylhet
Department of Computer Science and Engineering

Autumn Term 2020 - Class Test

Program: B.Sc. in CSE; Course: CSE 133: Data Structure

Time: 2 Hours

Marks: 20

[All questions are mandatory.]

- 1 a)** Split your ID. Show simulation to sort the split array using the merge sort algorithm. **7**
- b)** Which one is easier to implement between stack and queue? Why? **3**
- 2 a)** Split the digits of your student ID in an array. Show the simulation of binary search to find the second last digit of your student ID. **5**
- b)** Find and explain the time complexity for the following code. **5**
- ```
for (int i = 1; i <=n; i /= p)
 for(int j=0; j<=i/2; j++)
 {
 temp++;
 }
}
```