Mid Term-II, 09/ 04/ 2025

Paper: Competitive Programming and Efficient Coding (ITPE 212) **Time:50 min**

Maximum Marks: 15

Instructions: All questions are compulsory and assume missing data, if any.

1. Write code for creating a XOR linked list and find cycle in O(n) time complexity and O(1) space complexity. 6
2. Write a function/module to determine whether a given binary tree is skewed. 5
3. You're given start and end times for multiple lectures. Write module with O(nlogn) time complexity for finding minimum number of classrooms required so that no lecture overlaps in the same room. 4