



MID TERM EXAMINATIONS – September 2023

Programme	: B.Tech.	Semester	: Fall 2023-24
Course Title/ Course Code	: Data Structures and Algorithms/ CSE2002	Slot	: D21+D22+D23+D24
Time	: 1 ½ hours	Max. Marks	: 50

Answer all the Questions

Q.No.	Sub. Sec.	Question Description	Marks
1		What is the purpose of asymptotic notations? Explain them with some examples.	10 ⁸
2		Brief the categories of algorithms with suitable examples.	10 ⁸
3		Write an algorithm to perform Quick Sort for the given elements 24, 56, 47, 35, 10, 90, 82, 31. and analyse the best-case complexity of it.	10 ⁶
4		Develop an algorithm to search a number in a given set of numbers using binary search.	10 ¹¹
5		Give the algorithm to perform insertion on a doubly linked list.	10 ⁶

