## **Galgotias College of Engineering & Technology**

## Details of Lab Equipment : 2023-24 Department of Computer Science Engineering Labs

Lab No.-C-204

## Name: Data Structure Programing Lab

Lab/ Major Equipments : 36 Computers , CPU - (Processor) 12th Gen Intel (R)Core i7-12700 2.10 GHz. Ram -16 GB Rom-SSD 500 gb Mouse-hp Keyboard-hp Monitor - 23.8 in hp

**Description of Labs**: The Data Structure Laboratory offers practical exploration of fundamental data structures and algorithms. Through hands-on exercises and coding projects, students delve into concepts such as arrays, linked lists, stacks, queues, trees, and graphs. The lab provides a platform for implementing, analyzing, and optimizing algorithms for searching, sorting, and traversal. Students gain proficiency in understanding the efficiency and trade-offs associated with different data structures and algorithms. Emphasis is placed on problem-solving techniques and algorithmic thinking, fostering critical reasoning skills. Additionally, the lab enables students to apply data structures and algorithms in solving real-world problems across various domains, from software development to data analysis. By the end of the course, students acquire a solid foundation in data structures and algorithms, preparing them for advanced studies and careers in computer science and related fields.

