

## **Gandhinagar Institute of Science**

### **Gandhinagar University**

A Post Event Report on

“Industrial Visit at Aanand Agricultural University, Aanand”

(26<sup>th</sup> September 2024, Tuesday)

#### **Abstract:**

An Industrial visit was initiated and coordinated by Dr. Rachana Shukla, Head, Department of Life Science, Gandhinagar Institute of Science on 26<sup>th</sup> July, 2024 in order to impart knowledge about current industrial research and technology to the graduate and master’s students.

#### **Program overview**

An industrial visit was organized for graduate and post graduate students to provide practical exposure to the functioning of industries. The visit aimed to bridge the gap between theoretical knowledge and real-world application, enhancing students' understanding of industrial processes, management practices, and technological advancements. This report details the itinerary, observations, learnings, and feedback from the visit.

#### **Objectives**

- ❖ To provide students with practical insights into industrial operations.
- ❖ To understand the application of theoretical concepts in real-world scenarios.
- ❖ To observe and learn about modern technologies and innovations in the industry.
- ❖ To interact with academic professionals and gain knowledge about research and technology.

During the visit at Aanand Agricultural University, students learned about the latest research aspects in different areas of science. In order we had visited following departments as mentioned:

- 1. Department of Microbiology**
- 2. Department of Biochemistry**
- 3. Department of Nanotechnology**
- 4. Department of Tissue Culture**

#### **Laboratory Tour**

Students were introduced to various research projects focusing on Microbial genetics, Antibiotic resistance, Biofertilizer production, Methanogens, Nanotechnology and Environmental microbiology. Students learned the use of advanced equipment and highly specialized facilities such as PCR machines, electron microscopes, industrial scale shakers, anaerobic chambers, cold room, tissue culture facilities, green houses. Demonstrations included microbial culturing, staining techniques, and DNA extraction. Dr. Nakulkumar imparted special input at Biochemistry department by explaining functioning of Gas Chromatography and other analytical units.

In the Nanotechnology, they were taught about the principles and applications of highly sophisticated instruments such as, ICP-MS, DSC, FTIR, Zeta Potential, single crystal XRD and SEM.

In the department of tissue culture, they experienced about the technologies and procedure of stem cell and tissue culture technology for date palm, papaya, parwar, saffron, stevia etc. Students discussed the role of genomics in understanding microbial diversity and evolution.

### **Interaction with Faculty and Researchers**

Students had the opportunity to engage with microbiologists, asking questions about their research, career paths, and challenges in the field. They discussed on interdisciplinary collaboration and the importance of microbiology in healthcare, agriculture, and environmental science.

### **Learnings**

- **Advanced Techniques:** Students gained hands-on experience with key microbiological techniques and an understanding of their applications in research.
- **Research Insights:** Exposure to cutting-edge research in microbiology, including studies on microbial ecology, pathogenesis, and biotechnology.
- **Career Opportunities:** Insights into various career paths in microbiology, including academic research, industry roles, and government positions.
- **Safety and Ethics:** Emphasized the importance of safety protocols, ethical considerations, and regulatory compliance in microbiological research.

### **Feedback:**

Positive feedback received by the students. All the participants were satisfied with the visit and way of delivering the experiences of the experts in the different department. Most of the students were agreed to receive future notifications regarding the further events organized by GIS, GU.

### **Photo Gallery:**





