

**SGK GOVERNMENT DEGREE COLLEGE  
VINUKONDA, GUNTUR DISTRICT**



**FIELD VISIT OF SOLAR TREE  
AT AMARAVATHI SACHIVALYAM**

**DATE: 05.03.2022**

**TIME: 02.00 PM**

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**CONDUCTED BY**

**DEPARTMENT OF PHYSICS**

# Activity Report

| S. No. | Content                  | Details                              |
|--------|--------------------------|--------------------------------------|
| 1      | Name of the Programme    | Field visit of Solar Tree            |
| 2      | Date & Time              | 05.03.2022 & 02.00 PM                |
| 3      | Conducted by             | Department of Physics                |
| 4      | No. of Students attended | 40                                   |
| 6      | Program Convener         | B. NageswaraRao, lecturer in Physics |

**Objective of the Visit:** The primary objective of this field visit was to provide students with practical exposure to renewable energy technology and its applications. The visit aimed to enhance their understanding of solar energy generation through the innovative concept of a solar tree.

## **Activities Conducted:**

### **Introduction to Solar Energy:**

The visit commenced with an introductory session on solar energy, its importance in the context of renewable energy sources, and its role in addressing environmental challenges such as climate change. The benefits and challenges of harnessing solar energy were discussed.

### **Tour of Solar Tree Installation:**

- Explanation of the design and structure of the solar tree.
- Technical details of the solar panels, battery storage, and electrical connections.
- Demonstration of how the solar tree tracks the sun for maximum energy capture.

### **Operation and Maintenance:**

Students were provided with insights into the operation and maintenance of the solar tree. Discussions included routine maintenance tasks, cleaning procedures, and troubleshooting common issues.

### **Environmental and Economic Impact:**

A presentation on the environmental and economic impact of solar energy generation was held. Topics included reduced carbon emissions, cost savings, and the potential for grid integration.

**Interactive Session:**

An interactive session allowed students to ask questions and engage in discussions with experts and technicians present at the installation.

**Observations and Findings:**

The solar tree installation is an innovative and aesthetically pleasing approach to harnessing solar energy. It effectively utilizes limited ground space, making it suitable for urban and crowded environments. The tracking mechanism ensures optimal solar exposure throughout the day, maximizing energy production. The potential for reducing greenhouse gas emissions and dependence on non-renewable energy sources is significant.

**Conclusions:**

- The field visit to the solar tree installation provided students with a tangible example of renewable energy technology in action.
- It highlighted the importance of innovative solutions in addressing energy and environmental challenges.

**Recommendations:**

- Students recommend organizing more field visits to renewable energy installations and facilities to further enrich students' knowledge and promote sustainable practices.
- Encouraging research and projects related to renewable energy and energy efficiency within the college curriculum can help prepare students for the evolving energy landscape.

**Acknowledgments:** We extend our appreciation to the organizers and technicians at the Amaravathi solar tree for their hospitality and valuable insights during our visit.



GPS Map Camera


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