

Report on Project Demonstration

BSc. IIIrd (SEC)

Session 2023-2024

Department of Physics

(Sponsored by DBT Star College Scheme)

Date: 11 March 2024

Venue: PLT, Govt. Degree College, Sanjauli

Supervised by: Dr. Kirti Singha, Assistant Professor of Physics (Coordinator DBT Star College Scheme)

INTRODUCTION:

In the hallowed halls of the Government Degree College in Sanjauli, the classroom buzzed with the anticipation as SEC physics students prepared to showcase their knowledge and ingenuity to Dr. Kirti Singha, Assistant Professor of physics. On 11th march 2024, these students eagerly gathered to present six meticulously crafted working models under projects assigned and sponsored through DBT Star College Scheme, each a testament of their understanding of scientific principles and their passion for innovation. With Dr. Kirti Singha as their esteemed audience, the stage was set for a dynamic exchange of ideas and insights, as these young minds delved into topics ranging from renewable energy to indigenous technologies. As the demonstration began the classroom transformed into a hub of intellectual exploration where theory met practice and academic excellence shone brightly. All the groups were divided into six groups and the models were funded by DBT Star College Scheme.

Project Demonstrations:

1. Revival of Indigenous Technologies for VIKSIT BHARAT



Presented by Uday Singh, Archit Verma, Harish, and Chetna Thakur, this model focused on reviving indigenous technologies for the development of a self-reliant India. The students explained how traditional knowledge can

be integrated with modern advancements to address contemporary challenges in agriculture, energy, and water management. They emphasized the importance of preserving and promoting indigenous practices for sustainable development.

2. Geothermal Energy



Demonstrated by Vijay Kumar, Sujal Sansoi, and Radha Thakur, this model delved into the utilization of geothermal energy as a renewable energy source. The students elaborated on the process of harnessing heat from the Earth's core to generate electricity highlighting its potential as a reliable and clean energy solution. They discuss the benefits of geothermal energy such as its minimal environmental impact and consistent availability.

3. Self-Reliant House



Presented by Prince, Pranay, Dheeraj and Isha, this model depicted the concept of a self-reliant house equipped with sustainable technologies. The students explained how feature like rainwater harvesting system, solar panels

and wind energy mechanism can contribute to reducing the ecological footprint of households. They emphasize the importance of adopting eco friendly practices for promoting environmental sustainability.

4. Alternative Sources of renewable Energy: The promises of Solar and Wind Energy



Presented by Kpragati Nargis, Anshita, and Priyanshu, this model explore the promises of solar and wind energy as alternative sources of renewable energy. The students discussed the advantages of these clean energy technologies in reducing dependence on fossil fuels and mitigating climate change. They highlighted ongoing advancements in solar end wind energy generation, emphasizing their role in transitioning towards sustainable energy future.

5. Solar Water Irrigation System



Demonstrated by Neha Sharma, Avantika Negi, Tanvi, and Aditi, this model showcased a solar powered irrigation system designed to optimize agricultural water usage. The students detailed the functioning of the system, highlighting its ability to harness solar energy to pump water for irrigation purposes. They discussed the potential impact of such technologies in improving agricultural productivity while conserving water resources.

6. Hydro Power Plant



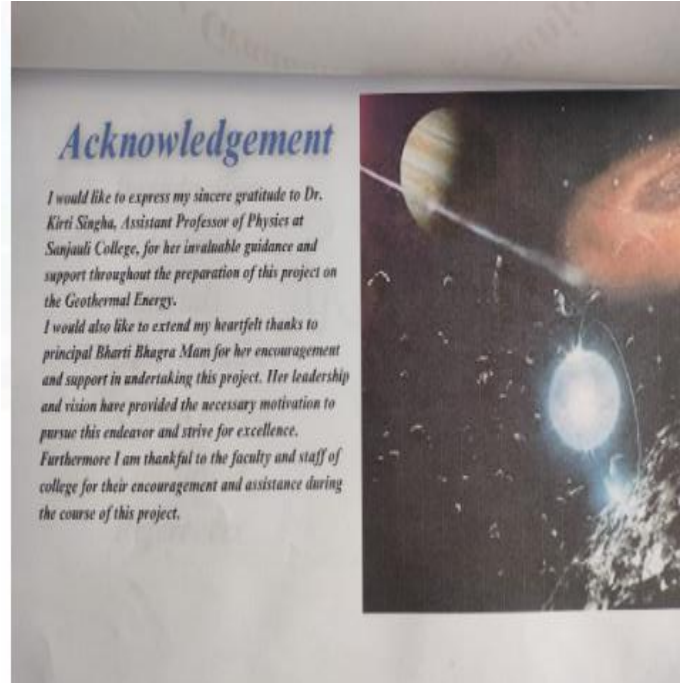
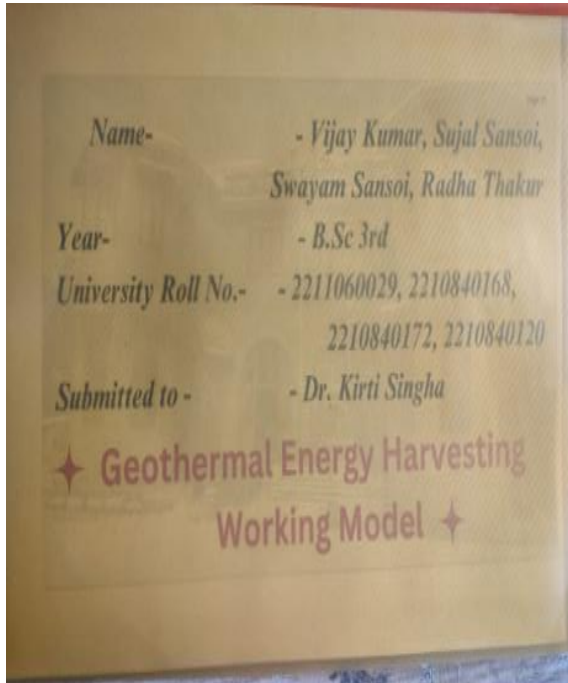
Demonstrated by Latish, Puneet, Mohit, and Pranjal, this model illustrated the working principles of a hydroelectric power plant. The students explained how the potential energy of water stored in reservoirs is converted into electricity through turbines and generators they discussed the significance of hydropower in providing reliable and renewable energy especially in regions with abundant water resources.

Project Reports:

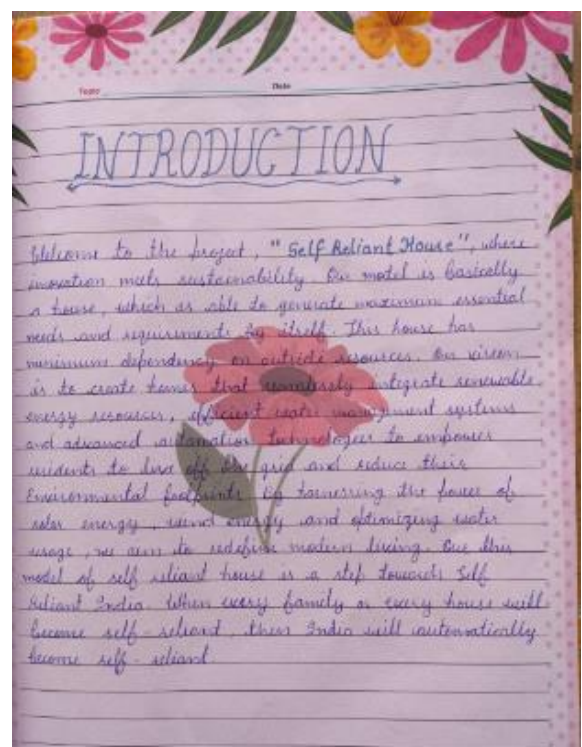
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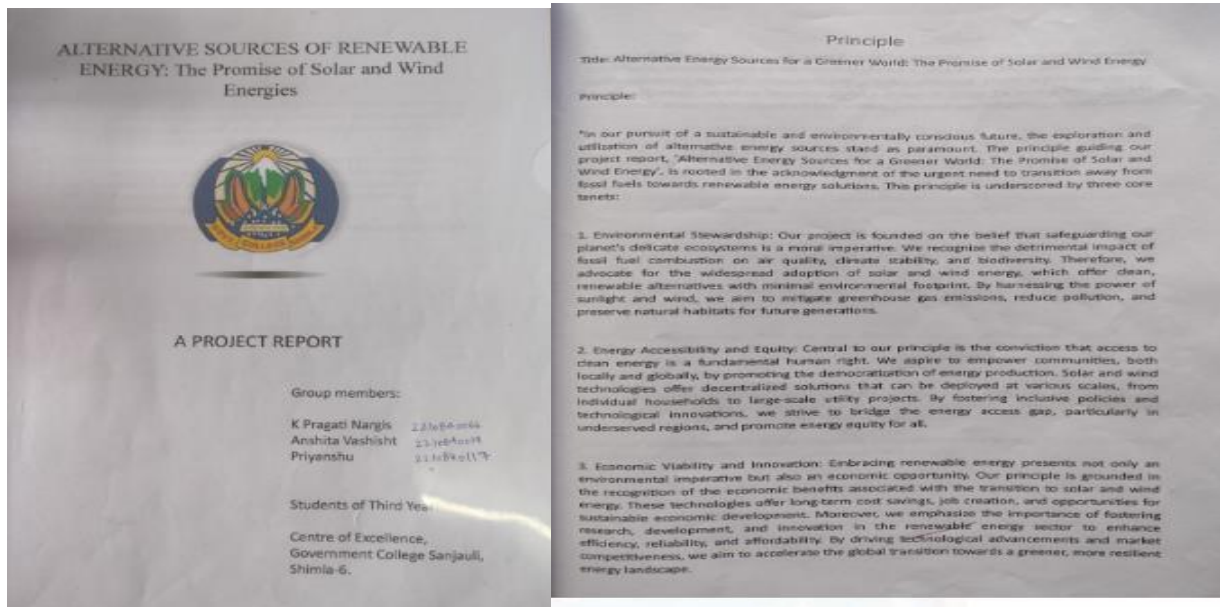
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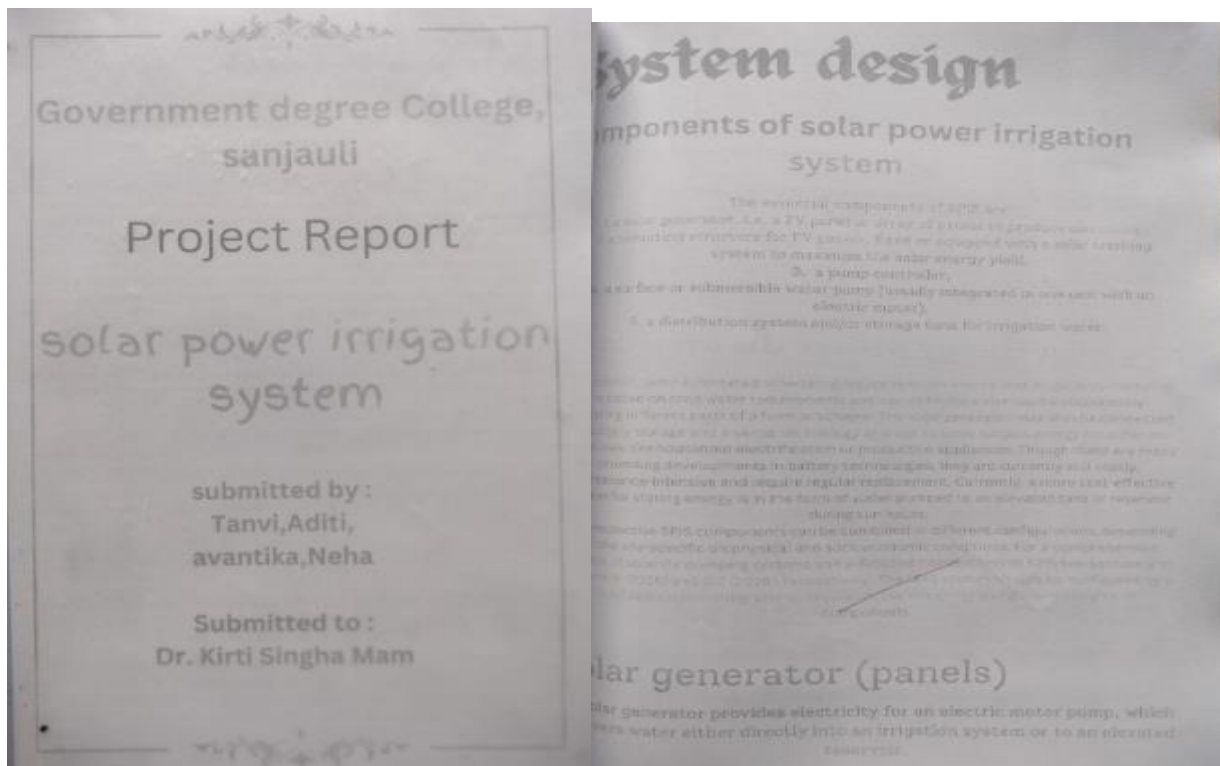
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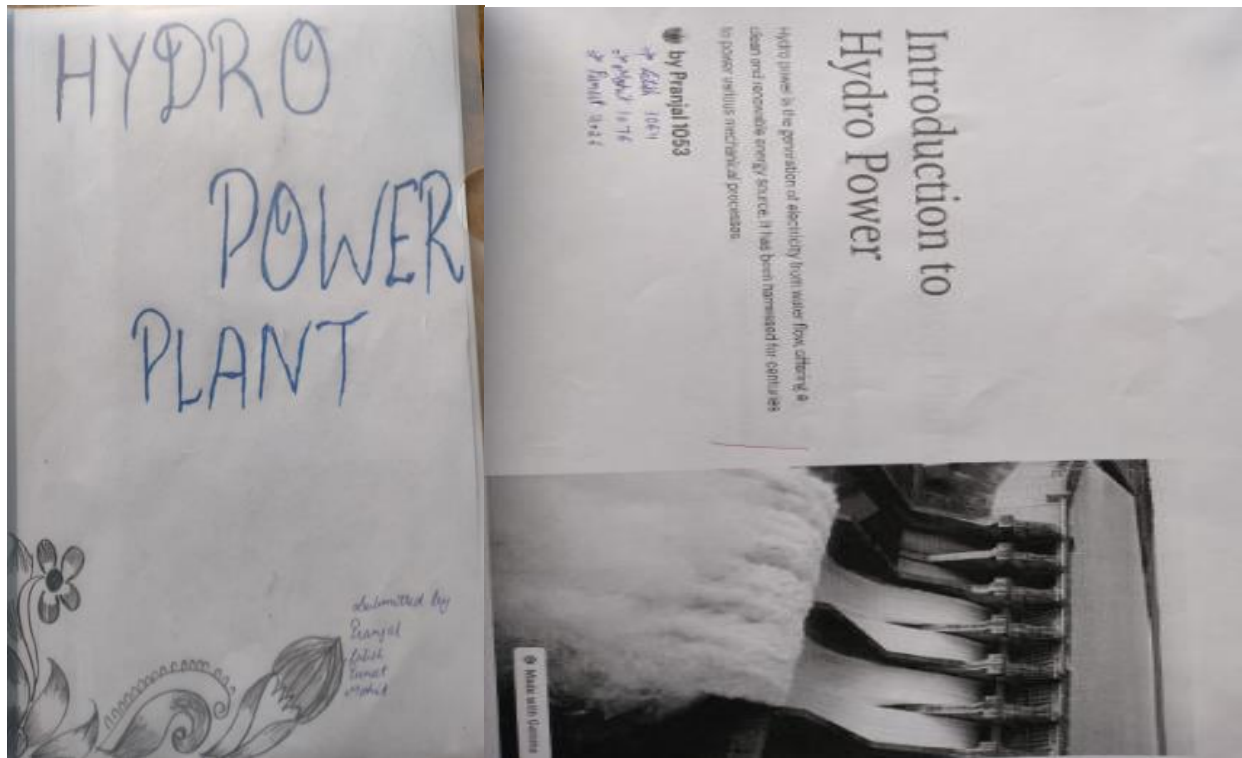
Group=IV



Group=V



Group=VI



Conclusion:





The project demonstrations by the physics students provided valuable insights into various aspects of renewable energy, indigenous technologies, and sustainable living practice. Their presentations showcased a deep understanding of scientific concepts and a commitment to addressing pressing environmental challenges. Dr. Kirti Singha, commended the students for their efforts and encouraged them to continue exploring innovative solutions for a sustainable future.

Compiled and reported by -- Vijay Kumar (Vice President UPSS)

Edited & submitted by Dr. Kirti Singha, (Assistant Professor of Physics)