

SGK GOVERNMENT DEGREE COLLEGE
VINUKONDA, PALNADU DISTRICT



GUEST LECTURE

DATE: 17.10.2023

TIME: 12.00 – 01.30 PM

CONDUCTED BY

PHYSICS DEPARTMENT

Activity Report

S. No.	Content	Name
1	Name of the Programme	Guest Lecture
2	Date & Time	17.10.2023 & 12.00 – 01.30 Pm
3	Conducted by	Physics Department
4	No. of Students attended	40
5	Name of the topic	Low temperature physics applications
6	Chief Guest	Sri B. Trinath, Lecturer in Physics, GDC Ulavapadu
7	Convener	Sri B. Nageswararao Lecturer in Physics, SGK GDC Vinukonda

Objectives:

- ❖ To make the students aware of the importance of Low temperature Physics
- ❖ To expose them to the various applications of low temperature physics in daily life.
- ❖ To interact with the guest faculty members and develop knowledge

Description of the event:

The guest lecture on "Exploring Applications of Low Temperature Physics" was conducted at Department of Physics SGK GDC VINUKONDA on 17.10.2023. The lecture aimed to introduce students to the fascinating world of low temperature physics and its various applications in modern science and technology.

The Guest invited was Sri B. Trinath lecturer in physics GVSM Govt. Degree College Ulavapadu, Prakasam dist, who came up with his lecture on the topic, 'Applications of Low Temperature Physics'. The program began with the welcome address by the Sri Rama k Kishore Behara, Lecturer in Zoology and proceeded by the presentation of the guest profile by the Dept In-charge, B.NageswaraRao and handed over the session to the guest of the day Sri B. Trinath. He presided over the lecture with his topic and explained the following things.

Introduction to Low Temperature Physics:

- Definition and scope of low temperature physics.
- Brief overview of historical developments in the field.
- Importance of studying matter at extremely low temperatures.

Fundamental Concepts:

- Quantum mechanics and its relevance to low temperature physics.
- Bose-Einstein condensation and superfluidity.
- Superconductivity and its remarkable properties at low temperatures.

Applications of Low Temperature Physics:

- Superconducting magnets in medical imaging (MRI) and particle accelerators.
- Cryogenics in space exploration and satellite technology.
- Low temperature detectors for astrophysics and particle physics experiments.
- Quantum computing and the role of superconducting qubits.
- Advancements in low temperature materials for energy-efficient electronics.

Feedback: Mr. B.NageswaraRao Dept In-charge, conveying the importance of the lecture to the students and extending his appraisal of the session and initiating feedback from students. Students felt excited and reflected their opinions in feedback.

- Ms. P. Maheswari from III B.Sc (M.P.Cs) gave her feedback that the session was highly informative and valuable to the students.
- J. Bhanu Prasad, III B.Sc (M.P.Cs) presented his feedback in the form of words expressing gratitude for teaching in an effective manner within a short time. He even requested for organizing such informative lectures in future.

Since the lecture was explained along with PPT it was very interesting for them to remember and understand the topics with ease.

The program ended with vote of thanks by Mr. B.NageswaraRao Dept In-charge, who displayed his gratitude in a unique way making this program a grand success

Outcome:

- ❖ Students were able to understand the importance of low temperature physics
- ❖ Students were able to interact with new faculty members through their lecture.
- ❖ Students were learn the Applications of Low temperature physics

PHOTOGRAPHS WITNESSING THE PROGRAM

