

Guru Nanak College, Sri Muktsar
Sahib Activities Report Performa
Session: 2024-25
Name of the Department: Physics
Sponsored by DBT, New Delhi (Under Star College Scheme)

- 1. Name of the Activity Organized:** Extension Lecture on Nuclear Physics
- 2. Date and Venue of the Activity:** October 23 2024, Guru Nanak College , Muktsar
- 3. Name of the Resource Person, Designation and Address:** Dr. Bhawandeep kaur Uppal Assistant Professor, University College Jaito.
- 4. Objective:** The objective of nuclear physics is to understand the fundamental properties, structure, and behavior of atomic nuclei, as well as the interactions between their constituents (protons and neutrons). It aims to explain phenomena such as nuclear reactions, radioactive decay, and nuclear forces, while also applying this knowledge to practical fields like energy production (nuclear reactors and fusion), medical technologies (radiation therapy, medical imaging), nuclear weapons, and the study of astrophysical processes such as stellar nucleosynthesis and neutron stars. At a more fundamental level, nuclear physics seeks to answer key questions about the origin of matter, the forces that govern subatomic particles, and the conditions under which nuclear transformations occur.
- 4. Number and Details of the Participants/ Beneficiaries:** Total 120 students participated in Extension Lecture. Following classes participated: B.Sc. I (N.M.), B.Sc. II (N.M.), B.Sc. III (N.M.) and M.Sc. I (Physics) from Guru Nanak College Muktsar and students from University College, Jaito also participated in it.
- 5. Registration/Feedback link:** Nil
- 6. Video/You-tube Link:** Nil
- 7. Outcome of the activity:** PG Department of Physics at Guru Nanak College, Sri Muktsar Sahib, conducted an insightful event on nuclear fusion, emphasizing its potential in energy generation and addressing environmental concerns related to nuclear waste. The lecture, delivered by Dr. Bhawandeep Kaur Uppal, provided valuable knowledge to B.Sc NM students under the Star College Scheme of DBT, New Delhi. Dr. Bhawandeep Kaur Uppal's lecture covered key aspects of nuclear physics, including nuclear reactions, the scattering of particles, and the nuclear shell model. Her discussion provided a comprehensive understanding of how these concepts relate to nuclear fusion and its application in energy generation. Additionally, Dr. Uppal took the time to address and clarify the students' doubts, making the session more interactive and informative. This approach likely helped deepen the students' grasp of the complex topics presented. The session concluded with a vote of thanks by Dr. Anita Rani, Head of the Physics Department, and a note of appreciation from

Principal Dr. Rana Baljinder Kaur, recognizing the department's effort in organizing the event.

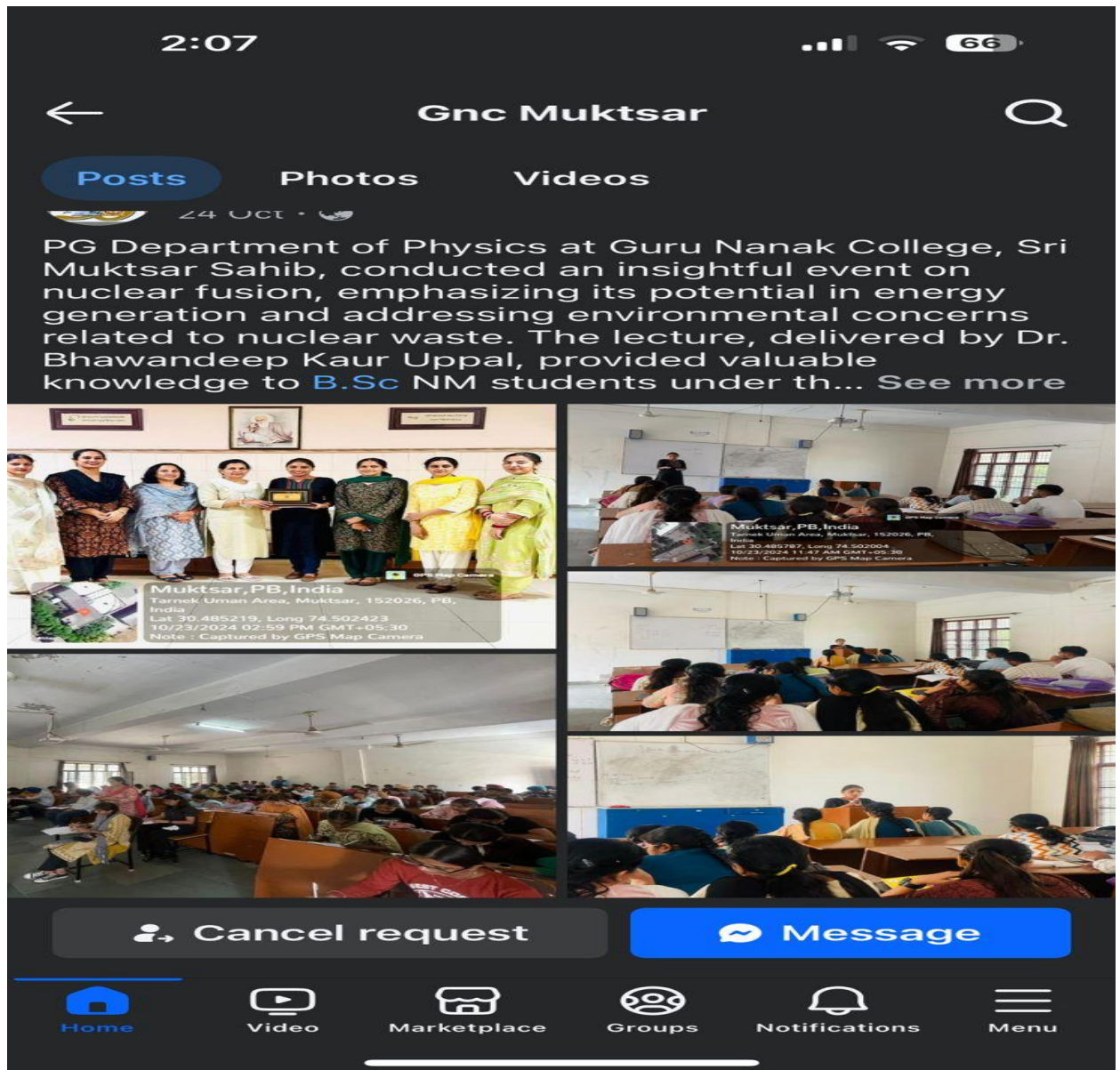
9. Attach Geo Tagged Photographs :







Muktsar, PB, India
 Tarnek Uman Area, Muktsar, 152026, PB,
 India
 Lat 30.485219, Long 74.502423
 10/23/2024 02:59 PM GMT+05:30
 Note : Captured by GPS Map Camera



10. **Members of the Organizing Committee:** Dr. Anita Rani, , Ms. Rajveer Kaur, Ms. Sandeep Kaur and Ms.Jeevanjot Kaur

11. **Name of the Department Coordinator:** Dr. Anita Rani

Dr. Anita Rani
DBT Program Coordinator

Dr. Rana Baljinder Kaur
Principal

