

DEPARTMENT OF PHYSICS ACTIVITY REPORT 2023-24

1. Moon Day celebration-21.07.2023
2. Hands-on Training for Making and Assembling Extension Boards-02.08.2023
3. National Energy Conservation Day celebrations-11.12.2023
4. Association Inauguration-13.12.2023.
5. Study Tour-07.02.2024-11.02.2024
6. Science Day celebrations-01.03.2024

Department of Physics, KKTU Govt. College, Pullut

1. Moon Day Celebrations: Moon Quiz Event Report

Moon Day marks the day in history when man landed on the Moon for the first time on 20th July 1969. As part of the **Moon Day celebrations 2023**, The Department of Physics, KKTU Govt. College, organized a **Moon Quiz** on **21.07.2023** to engage participants and foster interest in astronomy and lunar-related topics. The quiz was conducted through a Google Form, allowing participants to conveniently submit their responses online. The following report provides an overview of the Moon Quiz and its outcomes.

The Moon Quiz garnered a significant level of interest, with **340** individuals taking part in the quiz. Participants included students, faculty members, staff, and other members of the community.

The quiz was carefully designed to cover a wide range of lunar-related topics, including lunar phases, moon missions, moon facts, and historical significance. A total of 17 questions were included in the quiz, with varying levels of difficulty. The quiz was hosted on Google Forms, ensuring a user-friendly and accessible platform for participants to submit their responses. Participants showed enthusiasm in recalling various moon-related facts, demonstrating a general interest in astronomy.

Participants provided positive feedback about the quiz, expressing appreciation for the engaging and educational nature of the event. Several respondents mentioned that the quiz enhanced their understanding of lunar-related topics and piqued their curiosity in astronomy. The Moon Quiz served as an effective platform to celebrate Moon Day and promote interest in space exploration within the community.

We extend our gratitude to all participants for their enthusiastic involvement in the Moon Quiz. The Moon Quiz conducted as part of the Moon Day celebrations was a resounding success. It not only engaged participants but also succeeded in promoting awareness and interest in lunar-related topics. The event served as a valuable educational initiative, reinforcing the importance of space exploration and astronomy within the society. As a result of the positive response received, the Department of Physics may consider organizing similar events in the future to continue fostering curiosity and knowledge about the fascinating world beyond our planet.



2. Report on Hands-on Training for Making and Assembling Extension Boards conducted by the Department of Physics on 02.08.2023

Date and time: 02.08.2023(11.30-12.30pm)

Location: PHYSICS LAB

Organizer: Department of Physics

Attendees: 20

The Department of Physics arranged a hands-on training conducted by our lab attenders for the students on the making and assembling of extension boards for the department and laboratory. The training aimed to equip the students with practical skills in electronics and provide them with the knowledge to create extension boards to enhance various experiments and projects within the department and laboratory.

The main objectives of the training were to introduce the concept of extension boards and their importance in electronics, to teach the students about the different components used in extension boards, to provide hands-on experience in soldering and assembling the extension board, to demonstrate the testing and troubleshooting procedures for completed extension boards.

The training was conducted in the laboratory to provide a suitable environment for practical exercises. The lab attenders did an excellent job of explaining the concepts in a clear and concise manner. They demonstrated patience and provided individual attention to each student during the hands-on sessions. The attendees actively participated in the training, showing enthusiasm and eagerness to learn.

Feedback questions were asked to the students to assess their satisfaction with the training. The overall response was overwhelmingly positive, with many students appreciating the hands-on approach and the expertise of the lab attenders. Some suggestions were also received, such as providing more advanced training in the future and organizing follow-up sessions for complex projects.

The hands-on training for making and assembling extension boards was a resounding success. It not only equipped the students with valuable practical skills but also fostered collaboration and knowledge-sharing across various departments and common rooms in the college. By providing functional extension boards to other units, our department demonstrated its

commitment to serving the college community and contributing to the academic growth of the institution. .Moving forward, we plan to build on this success and continue offering similar training programs to enhance the capabilities of our students.

We extend our gratitude to the lab attenders **Mr. Jeelson K V, and Mr. Regi M G** who conducted the training with dedication and expertise. Their efforts contributed significantly to the success of the program. Additionally, we thank all the students who participated wholeheartedly in the training and made it a memorable learning experience.



3. Report on LED Christmas Star Making Workshop

Organized by the Department of History and Physics, KKTm Govt. College

In Collaboration with NSS, IQAC, and Science Forum

On the Occasion of National Energy Conservation Day on 11th December, 2023

The Department of History and Physics at KKTm Govt. College, in collaboration with NSS, IQAC, and the Science Forum, organized a workshop on making LED Christmas stars. The event took place on the occasion of the National Energy Conservation Day and aimed to impart practical skills to students while promoting energy-efficient practices. A total of **30 students from various departments** actively participated in the workshop, gaining hands-on experience in creating LED Christmas stars.

The workshop was inaugurated by Dr. Bindu Sharmila T K, the Principal of KKTm Govt. College. The event was graced by the presence of Dr. Remani K K, HOD History, Dr. Lovely George, HOD Physics, and Sri. Balaji M N, NSS Coordinator, who felicitated the gathering.

The workshop was led by a team of experienced individuals, including Dr. Dhanya N P, Assistant Professor in Physics, and students from the third year BSc Applied Physics program—Ajmalsha C A, Amjith M G, Akram P S, Midhunkrishna M K.

During the workshop, participants were enlightened on various aspects related to green energy consumption, sustainable energy resources, self-employability, skill enhancement, and interdisciplinary teaching-learning approaches. The aim was to not only teach the art of creating LED Christmas stars but also to instill a sense of responsibility towards energy conservation.

The LED Christmas star making workshop proved to be a successful and enriching event, providing students with both practical skills and valuable insights into the broader concepts of energy conservation. The collaboration between the departments of History and Physics, along with the support of NSS, IQAC, and the Science Forum, contributed to the holistic learning experience of the participants.

Date: 11.12.2023

Venue: Electronics lab

KKTM GOVT. COLLEGE, PULLUT
IN CONNECTION WITH THE NATIONAL ENERGY
CONSERVATION DAY
DEPARTMENTS OF HISTORY AND PHYSICS
IN ASSOCIATION WITH IQAC, NSS AND
SCIENCE FORUM

Organise

A WORKSHOP
ON LED CHRISTMAS STAR MAKING

10.00AM
11 DEC 2023

Electronics lab

Dr. Remani K K
HOD History

Dr. Bindu Sharmila T K
Principal

Dr. Lovely George
HOD Physics



Express Daily

4. Report on Physics Association Inauguration on 13.12.2023

Date and time: 13.12.2023 at 10.30 am

Location: II DC Physics class

Organizer: Department of Physics

The Physics Association was inaugurated on 13.12.2023 by Dr. Prasanth P, Assistant Professor of Physics, Sreerama Govt. Polytechnic College, Thriprayar. The event aimed to foster a spirit of scientific inquiry, collaboration, and academic excellence among the students interested in the field of physics.

Dr. Prasanth P commenced the ceremony with an enlightening inaugural address. He emphasized the significance of physics in understanding the fundamental principles governing the universe. He encouraged students to delve deep into the subject, explore its interdisciplinary nature, and apply their knowledge to solve real-world problems. He stressed the importance of academic excellence and urged students to strive for proficiency in theoretical knowledge as well as practical applications through hands-on experimentation and research. The speaker provided insights into diverse career opportunities available to physics enthusiasts, including academia, research, industry, and entrepreneurship. He encouraged students to explore their interests and pursue careers aligned with their passion for physics.

The inauguration of the Physics Association by Dr. Prasanth P marked the beginning of an exciting journey for students passionate about physics. His inspiring address motivated students to embark on a quest for knowledge, innovation, and excellence in the field of physics. The association is poised to serve as a platform for nurturing talent, fostering intellectual curiosity, and promoting scientific discourse among the physics enthusiasts at KKTU Govt. College. Dr. Prasanth also distributed prizes to students who achieved excellent performance in their academics.



5. Study Tour to National Institute of Oceanography, Goa

Date: 07.02.2024 to 11.02.2024

Introduction: The final year B.Sc. Applied Physics students, accompanied by two faculty members Dr. Dhanya N P and Ms. Sabitha P V and Lab Assistant Mr. Regi M G, embarked on a study tour to the National Institute of Oceanography (NIO) located in Goa. The purpose of the visit was to provide students with practical exposure to the interdisciplinary applications of physics in oceanography and marine sciences. The objectives of the study tour also include

1. To familiarize students with the ongoing research activities at the National Institute of Oceanography.
2. To understand the role of physics in various oceanographic studies and research.
3. To explore potential career opportunities in the field of oceanography and related disciplines.

Upon arrival at NIO, the students and faculty were warmly welcomed by the institute's staff. A brief introduction to the institute's history, mission, and research areas was provided. The students were divided into smaller groups and guided through various research laboratories. They had the opportunity to observe state-of-the-art equipment and experiments conducted in fields such as physical oceanography, marine geology, marine chemistry, and marine biology. Interactive sessions were conducted by senior scientists and researchers, who shared insights into their ongoing projects and the application of physics principles in their work. Students actively participated in discussions and asked questions regarding the research methodologies and findings. The students were briefed about the diverse career opportunities in oceanography and related fields. They were encouraged to consider pursuing higher studies or research in these areas.

The study tour to the National Institute of Oceanography, Goa, provided invaluable exposure to the practical aspects of oceanographic research for the final year B.Sc. Applied Physics students. It enhanced their understanding of the interdisciplinary nature of oceanography and inspired them to consider careers in this dynamic field. The tour was deemed successful in achieving its objectives of providing hands-on experience and fostering interest in oceanographic sciences among the students.



6. Report of National Science Day 2024 Celebration at KKTGM Govt. College on 01.03.2024

On March 1, 2024, KKTGM Govt. College marked the National Science Day 2024 with great enthusiasm. The event was organized by the departments of Botany, Physics, Zoology, IQAC, and the Science Forum, in collaboration with the **Kerala Academy of Sciences**. Dr. Shaji K M, Head of the Zoology Department, warmly welcomed everyone to the gathering. Dr. Bindu Sharmila T K led the proceedings as the presiding authority.

The function was inaugurated by Dr. Raghu K G, a retired Chief Scientist from CSIR-NIIST, Thiruvananthapuram, and Vice President of the Kerala Academy of Sciences. The event saw the felicitation of notable individuals including Dr. G. Ushakumari, Vice Principal of the college and Head of the Malayalam Department, Dr. Lovely George, IQAC Coordinator and Head of the Physics Department, and Mr. Binoy Thomas M P, Head of the Botany Department. Smt. Soumya K C, the Coordinator of the program and Assistant Professor of Zoology, extended gratitude and appreciation through the vote of thanks.

The seminar, attended by 60 students and 12 teachers, proved to be a valuable opportunity for active engagement and learning. Dr. Muhammed Yousuf from Farook College, Kozhikode, shared insights into Dye Sensitized Solar Cells for ambient light harvesting, shedding light on renewable energy solutions. Additionally, Dr. Arathi Dharmarathnam, a Research Associate from NBFGR Cochin and the Indian Virological Institute, delved into the intricacies of Finfish viral diseases, expanding attendees' understanding of aquatic health concerns. Furthermore, Dr. Jomon Sebastian from CUSAT provided valuable insights into targeted therapy for effective cancer treatment, highlighting advancements in medical science aimed at combating one of society's most challenging health issues.

The seminar concluded promptly at 2:00 PM, leaving attendees enriched with valuable insights and knowledge. Overall, the National Science Day 2024 celebration at KKTGM Govt. College was a resounding success, leaving a lasting impact on all those who participated and reaffirming the college's commitment to promoting scientific excellence and inquiry.

Seminar Details:

Date & Venue: 01.03.2024, Seminar Hall

DEPARTMENT OF ZOOLOGY, BOTANY AND PHYSICS, SCIENCE FORUM & IQAC
KKTGM GOVERNMENT COLLEGE, PULLUT, THIRUVANANTHAPURAM
KERALA, INDIA, 680663
(NAAC Reaccredited with A Grade)

NATIONAL SCIENCE DAY-2024
(Indigenous Technology for Vikasath Bharath)

KERALA ACADEMY OF SCIENCES

On: 01.03.2024 at 10 AM
Venue: Audio Visual Room

Speakers:
Dr. Raghu K G, Retired Chief Scientist, CSIR-NIIST, Thiruvananthapuram
Dr. G. Ushakumari, Vice Principal, KKTGM Govt. College
Dr. Lovely George, IQAC Coordinator, KKTGM Govt. College
Dr. Muhammed Yousuf, Farook College, Kozhikode
Dr. Arathi Dharmarathnam, Research Associate, NBFGR Cochin and the Indian Virological Institute

PROGRAMME SCHEDULE

Inauguration (10:00 AM to 10:30 AM)
By: Dr. Raghu K G, Retired Chief Scientist, CSIR-NIIST, Thiruvananthapuram

10:30 AM to 11:00 AM
Topic: Dye Sensitized Solar Cells for ambient light harvesting
Speaker: Dr. Muhammed Yousuf, Farook College, Kozhikode

11:00 AM to 11:30 AM
Topic: Finfish viral diseases
Speaker: Dr. Arathi Dharmarathnam, Research Associate, NBFGR Cochin and the Indian Virological Institute

11:30 AM to 12:00 PM
Topic: Targeted therapy for effective cancer treatment
Speaker: Dr. Jomon Sebastian, CUSAT

12:00 PM to 12:30 PM
Topic: Vote of Thanks
Speaker: Dr. Bindu Sharmila T K, Assistant Professor of Zoology



പൂർണ്ണമായും പൊതുവേ സിനിമയ്ക്കായി നൽകാനുള്ള ചലച്ചിത്രോത്സവം മാർച്ച് 8 മുതൽ 10 വരെ പെരിഞ്ഞനം മൂളി മേളാപ്പരമ്പരയിൽ പങ്കെടുക്കുന്നതിനായി കേരള സിനിമയുടെ സംവിധാനം പ്രവർത്തനം തുടങ്ങി. ഇതിന്റെ ഭാഗമായി ഉദ്യോഗസ്ഥർ ചലച്ചിത്രോത്സവത്തിന്റെ ഉദ്ദേശ്യം വിശദീകരിക്കുന്നതിനായി എ.ആർ രാജൻ സംവിധാനം ചെയ്ത ചലച്ചിത്രോത്സവം മേള ആരംഭിച്ചു. 15 ചിത്രങ്ങൾ പ്രദർശിപ്പിക്കും. മുഴുവൻ സിനിമയും കാണാൻ 300 രൂപയുടെ പാസ് എടുക്കണം. സെന്ററുകൾക്ക് മാത്രം പാസ് ഉൾപ്പെടെ വിവിധ ചരീട്ടകളും സൗകര്യമുണ്ട്. പുതുരാലമുക്ക് നഗറിൽ രാജൻ നാരായണൻ ക്ലബ്ബ് ഡയറക്ടർ.

കെകെടിഎം ഗവ. കോളജിൽ ദേശീയ ശാസ്ത്ര ദിനം

പൂർണ്ണമായും പൊതുവേ സിനിമയ്ക്കായി നൽകാനുള്ള ചലച്ചിത്രോത്സവം മാർച്ച് 8 മുതൽ 10 വരെ പെരിഞ്ഞനം മൂളി മേളാപ്പരമ്പരയിൽ പങ്കെടുക്കുന്നതിനായി കേരള സിനിമയുടെ സംവിധാനം പ്രവർത്തനം തുടങ്ങി. ഇതിന്റെ ഭാഗമായി ഉദ്യോഗസ്ഥർ ചലച്ചിത്രോത്സവത്തിന്റെ ഉദ്ദേശ്യം വിശദീകരിക്കുന്നതിനായി എ.ആർ രാജൻ സംവിധാനം ചെയ്ത ചലച്ചിത്രോത്സവം മേള ആരംഭിച്ചു. 15 ചിത്രങ്ങൾ പ്രദർശിപ്പിക്കും. മുഴുവൻ സിനിമയും കാണാൻ 300 രൂപയുടെ പാസ് എടുക്കണം. സെന്ററുകൾക്ക് മാത്രം പാസ് ഉൾപ്പെടെ വിവിധ ചരീട്ടകളും സൗകര്യമുണ്ട്. പുതുരാലമുക്ക് നഗറിൽ രാജൻ നാരായണൻ ക്ലബ്ബ് ഡയറക്ടർ.

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<https://youtu.be/SfGaW-rPkoE>