

BISHOP CHULAPARAMBIL MEMORIAL COLLEGE KOTTAYAM, KERALA. DEPARTMENT OF PHYSICS.

Presents ASTRA



PHYSICS ASSOCIATION REPORT 2023-2024

It gives me immense pleasure to present the report of Physics association '*ASTRA*' of the academic year 2023-2024.

Mitra Vinda S Kumar Secretary Physics association

ASTRA

ASTRA means 'star,' symbolizing our commitment to illuminating the path of knowledge and discovery. The aim of the association 'ASTRA' is to edify students, encouraging them to explore the vast expanse of science and technology while also fostering essential civic values. Bookish knowledge may be sufficient for academic excellence, but it falls far short of nurturing well-rounded individuals. To cultivate wisdom and responsible citizenship, students need to interact with society, experience current developments, and engage in community service. Beyond imparting subject knowledge, ASTRA aims to instill a sense of civic duty, compassion, and empathy towards those less fortunate.

We are immensely proud of the achievements of our association. ASTRA has played a pivotal role in the intellectual and social development of students. Despite the limited time and resources at our disposal, our members have shown remarkable resilience and dedication. The unwavering support and cooperation of both faculty members and students have been instrumental in making ASTRA a beacon of success. The annual report of the association ASTRA for the year 2023-24 is submitted herewith.

OFFICE BEARERS 2023-24

The Department of Physics has conducted their first association meeting of the academic year 2023-24 on 6th June 2023. The main purpose of the meeting was to elect the office bearing members of the association and to welcome everyone to the new academic year. The meeting was held on 6th June 2023 on 1:00pm at the physics lab. All the students and teachers gathered on time to attend the meeting.

The meeting started with welcome speech of our beloved Asst. prof. Tinu Ann Jose. She heartily welcomed everyone to the new academic year. She hinted us about the upcoming activities and mentioned the importance of the teamwork of the students for a successful association. Then the election process started. The election results are:

Everyone was satisfied with the outcome. The Vice President has expressed her willingness to pay attention to each one's opinions regarding association activities. The meeting was concluded by the vote of thanks of General Secretary. The meeting came to an end by 1:45pm.

Position	Name	Designation
Association President	Dr. Smitha Joseph	HOD
Vice President	Megha H Karat	III DC
General Secretary	Mitra Vinda S Kumar	III DC
Treasurer	Sneha Francis	III DC
3 rd DC Representative	Ammu K Reji	III DC
2 nd DC Representative	Jeleeta Lukose	II DC
Hand Magazine	Athira Aniyachan Aleena Maria Santhosh Indupriya A	III DC III DC II DC
Arts Club	Surya G Josiya George	III DC III DC

Position	Name	Designation
Sports	Janani Kanakaraj	III DC
	Treesa K Devasia	III DC
Quiz	Aswathy P	III DC
	Treesa K Devasia	III DC
Debate	Shahina K S	II DC
Placement	Ammu K Reji	III DC
	Geetha R	III DC
	Fathimathul Nadhiya P	II DC
	Krishnanjali p	II DC
Brochure and Promotion	Sneha Sabu	III DC
	Anna Elbi Simon	II DC
	Geetha R	III DC
Grievance cell	Josiya George	III DC
	Aswathy N V	II DC
	Abhirami S Vinod	II DC



Association Office bearers for the year 2023-24

INDEX

ACADEMIC PERFORMANCES
INDUSTRIAL VISIT
SEMINARS AND WORKSHOPS
SEMINARS ON RESEARCH METHODOLOGY AND IPR AND
EXTENSION ACTIVITIES -ACADEMIC RELATED
COLLABORATIONS/MoU WITH OTHER INSTITUTIONS
FREESHIPS/SCHOLARSHIPS
CAPACITY BUILDING & SKILL DEVELOPMENT PROGRAM
a) Soft skill programmes
u) boit shin programmes
b) I an ana a fe agreement ign time shills
b) Language & communication skills
c) Life skill programs
d) ICT related programs
GUIDANCE FOR COMPETITIVE EXAMINATIONS & CAREER COUNSELLING
PROGRAMS
STUDENT PROGRESSION (Previous Batch)

AWARDS/ MEDALS FOR OUTSTANDING PERFORMANCE IN SPORTS/ CULTURAL ACTIVITIES AT UNIVERSITY/ STATE/ NATIONAL/ INTERNATIONAL LEVEL

INTERCOLLEGIATE SPORTS AND CULTURAL EVENTS/COMPETITIONS IN WHICH STUDENTS OF THE INSTITUTION PARTICIPATED

INTERDEPARTMENTAL SPORTS AND CULTURAL EVENTS/COMPETITIONS IN WHICH STUDENTS OF THE INSTITUTION PARTICIPATED

ALUMNI ACTIVITIES

FUNDS RECEIVED FROM ALUMNI/ PHILANTHROPERS/ EXTERNAL AGENCIES

GENDER SENSITIZATION

IMPORTANT DAYS OBSERVED

ACTIVITIES INCULCATING HUMAN VALUES

PROGRAMMES FOR DIFFERENTLY ABLED STUDENTS

ACTIVITIES FOR THE STUDENTS FROM THE WEAKER SECTIONS

ACTIVITIES TO PROMOTE CONSTITUTIONAL VALUES

ACTIVITIES TO PROMOTE ENVIRONMENTAL SUSTAINABILITY

MAJOR GREEN INITIATIVES OF THE DEPARTMENT

ACADEMIC PERFORMANCE

During the academic year 2022-2023, 17 students in total appeared for the university examinations. Three students secured A+, three students secured A grade, three students secured B grade, and two students secured C grade respectively. The total pass percentage of the year 2022-2023 is 70.58%.

INDUSTRIAL VISIT REPORT





Students at VSSC, TVM

REPORT OF THE ACTIVITY

The industrial visit to Vikram Sarabhai Space Centre (VSSC) provided a comprehensive insight into the cutting-edge research and development activities in the field of space technology. As one of the premier centers of the Indian Space Research Organization (ISRO), VSSC plays a pivotal role in advancing India's space capabilities.

During the visit, the students were given a detailed tour of the facilities, including the assembly and testing areas for satellite launch vehicles. Witnessing the intricate processes involved in the fabrication and testing of propulsion systems was particularly fascinating. The precision and attention to detail exhibited by the scientists and engineers underscored the importance of quality assurance in space missions.

Moreover, students had the opportunity to interact with researchers and scientists who shared their experiences and insights into ongoing projects. Discussions ranged from satellite communication technologies to propulsion systems and remote sensing applications. It was inspiring to see the passion and dedication of the professionals working tirelessly to push the boundaries of space exploration.

Overall, the industrial visit to VSSC was an enriching experience that provided valuable exposure to the advancements in space technology. It reinforced the significance of collaboration, innovation, and perseverance in achieving breakthroughs in aerospace engineering. The students were grateful for the opportunity and look forward to applying the knowledge gained in their academic and professional endeavors.

PARTICIPANTS

- 1. Ammu K Reji
- 2. Janani Kanakaraj
- 3. Aleena Maria Santhosh
- 4. Geetha R
- 5. Athira Aniyachan
- 6. Sneha Sabu
- 7. Aswathy P
- 8. Treesa K Devasia

- 9. Josiya George
- 10. Sneha Francis
- 11. Megha H Karat
- 12. Mitra Vinda S Kumar
- 13. Krishnanjali P J
- 14. Jeleeta Lukose
- 15. Ardra Ranji P
- 16. Jislin Jose

Dr. Smitha Joseph H.O.D.

Department of Physics BCM College, Kottayam

SEMINARS AND WORKSHOPS

A TALK ON PHOTOCHROMIC MATERIALS: THEIR DEVELOPMENT AND APPLICATION ORGANISED BY PHYSICS DEPARTMENT





Photochromic materials

Photochromic materials are those that show a reversible change in optical properties (colour) through the action of light i.e., electromagnetic radiation.



The Department of Physics at BCM College for the expansion of knowledge of students on of students in exploring new Physics Ideas organised a class on Friday, 05th January 2024.

At exactly 11:30 AM, the chief guest, teachers and students arrived and joined to conduct the class. Smita Miss, Head of the Physics Department delivered the welcome speech. Ms. Sreedevi, a research scholar from MES Ponnani College in association with the Institutional Innovation Council, presented a class on the topic "Techniques for developing Photochromic Materials and its Application". The presentation captured the attention of <u>the</u> audience. Mitra, a third-year student of the said department offered the vote of thanks on behalf of the department.

The meeting ended successfully by spreading the rays of hope in student minds to explore new things through study, research and paper publication. The dedication to our subject reflected in the vastness of the class.

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THE DETAILS OF THE PARTICIPANTS

AN INSIGHT INTO MEDICAL PHYSICS IN HEALTHCARE



Vykhari Lecture Series

DEPARTMENT OF PHYSICS

Presents

SEMINAR ON

AN INSIGHT INTO MEDICAL PHYSICS IN HEALTHCARE



Ms. Anitta Thomas

Graduate Trainee Clinical Scientist (Radiotherapy) East and North Hertfordshire NHS Trust ,UK

Venue: Sr.Savio hall

12 January 2024 Time:10:30 am



Welcoming the resource person



Diving through the concept of Medical Physics



Students eagerly attending the lecture



This lecture series was conducted as part of vykhari lecture series. The lecture titled "An Insight into Medical Physics in Healthcare" provided a comprehensive overview of the vital role that medical physics plays in advancing healthcare. Led by esteemed speaker Ms. Anitta Thomas, who is a graduate trainee Clinical Scientist East and North Hertfordshire NHS Trust, UK, the session offered attendees a deeper understanding of the intersection between physics and medicine.

The seminar commenced with an exploration of the fundamental principles of medical physics, emphasizing its application in diagnosis, treatment, and research within the healthcare domain. She elucidated the various imaging techniques such as X-rays, MRI, and CT scans, highlighting their significance in diagnosing diseases and monitoring treatment efficacy.

Furthermore, the seminar delved into the critical role of medical physicists in radiation therapy and cancer treatment. She discussed how medical physicists collaborate with oncologists and radiologists to

ensure the precise delivery of radiation to cancerous tumors while minimizing damage to surrounding healthy tissue.

The session also addressed emerging trends and technologies in medical physics, such as proton therapy and molecular imaging, offering insights into their potential impact on patient care and outcomes.

In conclusion, the seminar on medical physics in healthcare provided attendees with a deeper appreciation for the pivotal role of physics in improving diagnosis, treatment, and research within the medical field. Ms. Anittas' expertise and engaging presentation style ensured that participants left the seminar with a renewed enthusiasm for the transformative potential of medical physics in healthcare.

THE DETAILS OF THE PARTICIPANTS

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SEMINARS ON RESEARCH METHODOLOGY AND IPR AND ENTREPRENEURSHIP

AN INTRODUCTION TO RESEARCH METHODOLOGY





Exploring the Foundations of Research Methodology



Unveiling the Techniques of Research Methodology

A talk on research methodology and persepectives of life was taken by the resource person Dr. Elizabeth V John on 23rd January 2024 at Room Nio. 314 in 3:00pm. In a thought-provoking session on research methodology and perspectives of life, attendees were treated to a comprehensive exploration of the diverse approaches to studying and understanding life. The discussion delved into various methodologies employed in research, shedding light on their strengths and limitations.

Participants examined the significance of adopting a multi-disciplinary approach, emphasizing the importance of integrating insights from different fields to gain a holistic understanding of life. From qualitative to quantitative methods, the session underscored the value of employing a range of research techniques to uncover the complexities of life phenomena.

Moreover, the discussion touched upon the role of perspective in shaping research inquiries and interpretations. Attendees explored how individual biases and cultural contexts influence researchers' perspectives, emphasizing the need for reflexivity and critical self-awareness in the research process.

Furthermore, the session highlighted the evolving nature of research methodologies in response to technological advancements and societal changes. Participants discussed emerging trends such as mixedmethods research and participatory approaches, recognizing their potential to enrich our understanding of life in all its dimensions.

In conclusion, the session on research methodology and perspectives of life provided attendees with a nuanced understanding of the diverse approaches to studying life phenomena. By fostering dialogue and critical reflection, it encouraged participants to embrace complexity and diversity in their research endeavors, ultimately contributing to the advancement of knowledge and human understanding

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THE DETAILS OF THE PARTICIPANTS

EXTENSION ACTIVITIES -ACADEMIC RELATED

SUNSPOT OBSERVATION



On August 18, 2023, the Department of Physics embarked on a significant solar observation mission, focusing their attention on sunspots. The observational event commenced promptly at 1:00 pm in the vicinity of Sr. Savio Hall, drawing the interest of both faculty members and curious students alike. Equipped with specialized solar telescopes and advanced instruments, Physics Department embarked on this venture with enthusiasm. The primary objective was to meticulously study the sun's surface and identify sunspots - temporary phenomena caused by magnetic activity beneath the sun's photosphere. These sunspots often provide valuable insights into the sun's complex magnetic field interactions. As the observation progressed, participants marvelled at the sun's fiery radiance through the telescopes' special filters, allowing safe viewing of the intense solar emissions. The atmosphere was filled with an air of scientific inquiry as discussions and interpretations of the sunspot patterns unfolded. Sunspots, as windows into solar dynamics, hold implications for space weather forecasting and broader astrophysical studies. This event not only enriched participants' understanding of solar phenomena but also exemplified the department's commitment to hands-on, experiential learning. In conclusion, the Department of Physics' sunspot observation on August 18, 2023, stands as a testament to the institution's dedication to scientific exploration and knowledge dissemination, fostering a spirit of inquiry that will undoubtedly illuminate the minds of the next generation of physicists.



The sunspot which was observed in Telescope



Students from St. Annes, Kottayam school observing the Sunspot through the telescope

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EXPERIMENTAL CLASS AND QUIZ COMPETITION ON NATIONAL SCIENCE DAY



The primary objective of the event was to promote scientific curiosity and knowledge among students from 5th to 9th standard. The experimental class aimed to provide students with hands-on experience and practical insights into various scientific phenomena. Through engaging demonstrations and interactive sessions, students were introduced to fundamental scientific principles in a fun and accessible manner. Following the experimental class, a quiz competition was conducted to test the students' understanding of scientific concepts and their ability to apply knowledge in problem-solving scenarios. The quiz encompassed topics ranging from physics, chemistry, biology, to general science, challenging participants to think critically and analytically.

Students from 5th to 9th standard enthusiastically participated in both the experimental class and the quiz competition. Their eagerness to learn and engage with scientific concepts was evident throughout the event. The experimental class featured captivating demonstrations, such as optical illusions, simple experiments on electricity and magnetism, and chemical reactions, capturing the attention and imagination of the students. The quiz competition sparked a spirit of healthy competition among the participants, fostering teamwork and camaraderie as students collaborated to answer questions.

The experimental class and quiz competition on National Science Day proved to be a resounding success, inspiring young minds to explore the wonders of science and igniting a passion for learning.

On the occasion of National Science Day, celebrated on 28th February annually to commemorate the discovery of the Raman effect by Indian physicist Sir C.V. Raman, an experimental class and quiz competition were organized by Arpitha Chandran and Josna B. Pradeep, from the 1st-year Physics Department. The event took place on 28th February 2024, on 2:00 pm at Government HSS, Kudamaloor, Kottayam.



EXPERIMENTAL CLASS AND QUIZ COMPETITION ON NATIONAL SCIENCE DAY



On the occasion of National Science Day, celebrated on 28th February annually to commemorate the discovery of the Raman effect by Indian physicist Sir C.V. Raman, an experimental class and quiz competition were organized by Arpitha Chandran and Josna B. Pradeep, from the 1st-year Physics Department. The event took place on 26th February 2024,on 2:00 pm at Government Model Higher Secondary School, Puthanangadi, Kottayam.

The primary objective of the event was to promote scientific curiosity and knowledge among students from 5th to 9th standard.

The experimental class aimed to provide students with hands-on experience and practical insights into various scientific phenomena. Through engaging demonstrations and interactive sessions, students were introduced to fundamental scientific principles in a fun and accessible manner. Following the experimental class, a quiz competition was conducted to test the students' understanding of scientific concepts and their ability to apply knowledge in problem-solving scenarios. The quiz encompassed topics ranging from physics, chemistry, biology, to general science, challenging participants to think critically and analytically.

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EXPLORING THE MYSTERIES OF BLACKHOLES

CLASS CONDUCTED ON THE BASIS OF WORLD SPACE WEEK (OCTOBER 4 - 10)







ORGANIZED BY : BREAKTHROUGH SCIENCE SOCIETY AND DEPARTMENT OF PHYSICS, BCM COLLEGE

On 11/10/23, a captivating one-hour class on the subject of "Black Holes" was conducted at St. Anne's Higher Secondary School. The session aimed to introduce students to the enigmatic phenomena of black holes and shed light on their mysteries.

The session was taken by Ms. Arpitha Chandran and Ms. Josna B Pradeep of 1 DC Physics.

The class commenced with a basic introduction to black holes, explaining them as regions in space where gravity is so strong that nothing, not even light, can escape. Students were guided through the formation of black holes, including the processes of stellar collapse and supermassive black holes at the centres of galaxies. The instructors elaborated on the properties of black holes, such as their event horizon, singularity, and how they distort space and time. The class delved into Stephen Hawking's groundbreaking theory of Hawking radiation, which allows black holes to slowly lose mass and eventually evaporate. Students were updated on recent discoveries related to black holes, including the first-ever image of a black hole's event horizon and ongoing research. The instructors shared fascinating facts about black holes, from the concept of spaghettification to the extreme time dilation near them.

The class concluded with an Interactive session, where students had the opportunity to ask questions and clarify their doubts.

In this engaging one-hour session, students at St. Anne's Higher Secondary School gained a basic understanding of black holes and the mysteries surrounding them. The class aimed to spark curiosity and interest in the fascinating field of astrophysics and the enigmatic cosmos.

EXPLORING THE MYSTERIES OF BLACKHOLES

CLASS CONDUCTED ON THE BASIS OF WORLD SPACE WEEK (OCTOBER 4-10)



ORGANIZED BY : BREAKTHROUGH SCIENCE SOCIETY AND DEPARTMENT OF PHYSICS, BCM COLLEGE

On 18/10/23, a captivating one-hour class on the subject of "Black Holes" was conducted at M. T. Seminary High School. The session aimed to introduce students to the enigmatic phenomena of black holes and shed light on their mysteries.

The session was taken by Ms. Arpitha Chandran and Ms. Josna B Pradeep of 1 DC Physics.

The class commenced with a basic introduction to black holes, explaining them as regions in space where gravity is so strong that nothing, not even light, can escape. Students were guided through the formation of black holes, including the processes of stellar collapse and supermassive black holes at the centres of galaxies. The instructors elaborated on the properties of black holes, such as their event horizon, singularity, and how they distort space and time. The class delved into Stephen Hawking's ground-breaking theory of Hawking radiation, which allows black holes to slowly lose mass and eventually evaporate. Students were updated on recent discoveries related to black holes, including the first-ever image of a black hole's event horizon and ongoing research. The instructors shared fascinating facts about black holes, from the concept of spaghettification to the extreme time dilation near them.

The class concluded with an Interactive session, where students had the opportunity to ask questions and clarify their doubts.

In this engaging one-hour session, students at M. T. Seminary High School students gained a basic understanding of black holes and the mysteries surrounding them. The class aimed to spark curiosity and interest in the fascinating field of astrophysics and the enigmatic cosmos.



FREESHIPS/ SCHOLARSHIPS

Name of the Student	Name of Freeships / Scholarship	Amount (RS.)
Athira Aniyachan	E grantz	Rs. 4608
Athira Aniyachan	Kerala Motor Transport Workers Welfare Fund	Rs. 3000
Geetha R	E grantz	Rs. 4000
Janani Kanakaraj	Financial Assistance	Rs.12000
Janani Kanakaraj	Alumni Scholarship	Rs. 30000
CAPACITY BUILDING & SKILL DEVELOPMENT PROGRAM

1. SOFT SKILL PROGRAMMES

AN INTRODUCTION TO LEARNING DISABILITIES



Report of the Activity

The seminar on "AN INTRODUCTION TO THE LEARNING DISABILITIES " held by Physics department of B.C.M Collage on 6 march 2024 at Room no.314, aimed to raise awareness and provide insights into learning disabilities, their impact, and strategies for support. The event, attended by students and faculty members, provided provided valuable insights into learning disabilities.

The seminar commenced with prayer song and welcome speech by Dr. Elizabeth John Assistant professor, Physics department. The keynote address by Sr. Anjitha SVM delved the concept of learning disabilities, emphasizing neurological differences affecting information processing. Common types such as dyslexia, dyscalculia, and ADHD were discussed. The seminar outlined the challenges individuals with learning disabilities encounter in educational settings, including stigma, misconceptions, and inadequate support systems.

Attendees engaged in a lively Q&A session, seeking clarification on various topics such as assessment procedures, legal rights, and the role of educators in supporting students with learning disabilities. Attendees expressed appreciation for the informative presentations and requested further workshops on specific topics related to learning disabilities, indicating a growing interest in enhancing inclusivity within the academic community.

Ms Ammu k Reji from 3rd DC, delivered vote of thanks. The seminar served as a valuable platform for fostering understanding and empathy towards individuals with learning disabilities. It underscored the importance of collaborative efforts among educators, students, and support services to create an inclusive learning environment that enables every individual to thrive academically and personally.



THE DETAILS OF THE PARTICIPANTS

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WORKSHOP ON FLOWCHART AND ALGORITHM





Mrs. Angitha Jeesis C from the Computer Science Department conducted a workshop on flowchart and algorithm on 10th October 2023 from 9:30 am onwards.

The workshop began with an introduction to flowcharts, focusing on their role in visually representing processes. Participants engaged in practical exercises, creating flowcharts for simple tasks like making a sandwich and solving mathematical problems. Through these activities, they learned about various symbols used in flowchart diagrams.

Following the discussion on flowcharts, attention shifted to algorithms. Participants were introduced to the concept of step-by-step instructions for problem-solving. They practiced designing algorithms for everyday tasks and computational problems, emphasizing clarity, efficiency, and correctness.

Throughout the workshop, participants actively engaged in discussions, sharing insights and challenges encountered during flowchart and algorithm creation. Real-world applications of these concepts were explored, highlighting their relevance in software development and business process management.

In conclusion, the workshop provided a foundational understanding of flowcharts and algorithms, empowering participants with structured problem-solving methodologies. Further practice and exploration were encouraged to enhance proficiency in these essential skills.

Overall, the workshop facilitated a collaborative learning environment, equipping participants with valuable tools for logical thinking and problem-solving.

SI. No.	NAME	CLASS
1	Mitra Vinda S Kumar	3 rd DC Physics
2	Ammu K Reji	3 rd DC Physics
3	Sneha Sabu	3 rd DC Physics
4	Athira Aniyachan	3 rd DC Physics
5	Aleena Maria Santhosh	3 rd DC Physics
6	Treesa K Devasia	3 rd DC Physics
7	Josiya George	3 rd DC Physics
8	Geetha R	3 rd DC Physics
9	Surya G	3 rd DC Physics
10	Megha H Karat	3 rd DC Physics
11	Sneha Francis	3 rd DC Physics
12	Aswathy P	3 rd DC Physics
13	Janani Kanakaraj	3 rd DC Physics

THE DETAILS OF THE PARTICIPANTS

Teacher in-charge: A. Dr. Smitha Joseph

Head in Charge Department of Physics Bishop Chulaparambil Memorial College Kottayam-686 001

GUIDANCE FOR COMPETITIVE EXAMINATIONS & CAREER COUNSELLING PROGRAMS

TALK ON CAREER PROSPECTS OF PHYSICS



Report of the Activity

On 18th August 2023, the Physics Department of BCM College conducted a talk on career prospects of Physics by respected Dr. Nibu A George, assistant professor of Baselious College Kottayam. The program was conducted on 18th August 2023 in room no: 314 at 2 pm. The program started with a prayer and welcome speech from our Head of the Department Dr. Smitha Joseph. The program was exciting.Our resource person told us about interesting careers regarding every student's tastes and interests in their future. His power point presentation talk showed us many types of careers which we can take after physics without any difficulties even if we are taking an entirely different career than what we are studying today.His next topic was very crucial as it told us about many entrance exams we should attend in our future like IIT JAM, JEE, TIFR, etc. He showed us many universities which has merits and demerits on different criteria. His talk was very informative rather it was something beneficial for us who were in a confusion of our careers. After his class section students asked doubts and he cleared each of it very clearly, leaving no doubts. We are blessed to have a resource person as Dr. Nibu Gorge.



THE PARTICIPATION LIST

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### CAREER AS A DATA SCIENTIST



NAAC ACCREDITED WITH A* GRADE (CGPA-3.46)

### DEPARTMENT OF PHYSICS

Presents

### **TALK ON :**

## "CAREER AS A DATA SCIENTIST "



DATE : 1/11/2023 TIME : 12 . 15 pm VENUE : Room No. 314

BY, Ms. RAIZA REBECCA



Guiding Students on the Path to Becoming Data Scientists



Teaching the Art of Data Science



Capturing the Essence of Data Science in the Classroom

On November 1st, 2023, at 12:315 PM, Raiza Rebecca, our alumni, delivered an insightful presentation on her career as a data scientist, providing valuable insights into her journey and experiences in the field.

Raiza commenced her talk by elucidating her passion for data science, which stemmed from her curiosity about uncovering patterns and deriving meaningful insights from data. She recounted her educational background, which included rigorous training in mathematics, statistics, and computer science, laying a strong foundation for her career.

During her presentation, Raiza shared her professional experiences, highlighting the diverse range of projects she had undertaken. She discussed her role in leveraging machine learning algorithms to predict customer behavior for a leading e-commerce company, as well as her involvement in developing innovative solutions for optimizing supply chain operations in the healthcare sector.

Moreover, Raiza emphasized the importance of continuous learning and professional development in the rapidly evolving field of data science. She underscored the significance of staying abreast of emerging technologies and methodologies to remain competitive and deliver impactful results.

In conclusion, she provided a comprehensive overview of her journey as a data scientist, offering valuable insights and inspiration to aspiring professionals in the field. Her dedication, expertise, and passion for data science were evident throughout the presentation, reaffirming her status as a distinguished practitioner in the field.

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### THE DETAILS OF THE PARTICIPANTS

### **STUDENT PROGRESSION (Previous Batch)**

### a) Placement

Uty Reg No.	Name of the Student	Post and Name of the employer	Pay package at appointment	Proof
200021035837	Sneha Surendran	Department of Post, Govt of India	24500/month	<section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header><section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header></section-header>

### b) Higher Education

Uty Reg No.	Name of the Student	Program graduated from	Name of institution joined	Name of programme admitted to	Proof
200021035824	Ananya Raju	BSc Physics	Assumption College, Changanaserr y	MSc. Physics	
200021035827	Aswini Santhosh	BSc Physics	CMS College, Kottayam	MSc. Physics	CONCOLLEGENOTENAM Deals of summer of the shap 2013-2014 Summer of the shap 2014 Summer of the shap
200021035828	Lakshmi P S	BSc Physics	Excellence Institute of Information Technology	PDCFA	
200021035829	Nandhana Manoj	BSc Physics	Assumption College, Changanaserr y	MSc. Physics	
200021035831	Varsha. P. Nair	BSc Physics	St. Joseph's College of Engineering, Pala	MCA	ST. JOSEPH'S CHLEGE OF ENGINEERING AND TECHNOLOGY. PALAI- 23/MCA060 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII

200021035832	Aisha Sali S	BSc Physics	Saintgits College of Engineering, Pathamuttom	MCA	EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXERCISE EXE
200021035834	Elsa Rose K W	BSc Physics	Prism Infotech, Kottayam	PDCFA	
200021035839	Divyamol S	BSc Physics	Veranda Race	SSC Coaching	
200021035840	S. Amrithak rishna	BSc Physics	Saintgits College of Engineering, Pathamuttom	MCA	

c) Exams passed.

Uty Reg No.	Name of the Student	Examination Passed	Roll Number	Proof
200021035837	Sneha Surendran	SSC		<section-header></section-header>

### AWARDS FOR OUTSTANDING PERFORMANCE IN SPORTS/ CULTURAL ACTIVITIES

Name of the Student	Name of the award/ medal	Team / Individual	University/State/ National/ International	Sports/ Cultural
Janani Kanakaraj	Mounteneering Adventure Course	Individual	National	Sports
Janani Kanakaraj	Mounteneering Adventure Advanced Course	Individual	National	Sports
Treesa K Devasia	Nilgiri Expedition	Individual	National	Sports

### NCC MOUNTAINEERING CAMP REPORT

### MOUNTAINEERING ADVENTURE COURSE CONDUCTED AT JIM&WS NUNWAN PAHALGAM

Date:18/04/2022-02/05/2022

### Location: Pahalgam , Jammu & Kashmir

The NCC mountaineering camp was conducted with the aim of providing cadets with practical training in mountaineering skills, fostering leadership qualities, and promoting teamwork among participants. The camp took place over 15 days and included various activities designed to challenge and develop the physical and mental capabilities of the cadets. Basic Mountaineering Training activities: Cadets received instruction in essential mountaineering techniques, including rope handling, rock climbing, rappelling, and knot tying, river crossing, tent pitching, zip wire.

Advanced sessions were conducted for experienced cadets, focusing on technical climbing, ice climbing, and high-altitude survival skills. Ms. Janani Kanakaraj of II BSc Physics participated in this adventurous course.

Leadership workshops and exercises were conducted to develop leadership qualities such as decisionmaking, communication, and teamwork. Cadets engaged in environmental conservation

activities, such as waste management, trail maintenance, and Leave No Trace principles. Interactions with local communities were organized to promote cultural exchange and mutual understanding.

All participants successfully completed the basic and advanced mountaineering training. Cadets demonstrated improved physical fitness, technical proficiency, and confidence in challenging outdoor environments. Positive feedback received from instructors regarding the discipline, dedication, and enthusiasm of the cadets. Enhanced camaraderie and teamwork among participants, fostering a spirit of unity and mutual support. Adverse weather conditions, including inclement weather and temperature fluctuations, posed challenges during outdoor activities. Limited access to certain training facilities and resources impacted the scheduling and execution of training sessions. Ensuring the safety and well-being of participants in remote and rugged terrain required meticulous planning and risk management.





Glimpse of Adventure camp at Pahalgam, Jammu & Kashmir

The NCC mountaineering camp was a resounding success, providing cadets with valuable opportunities for personal growth, skill development, and experiential learning. The camp not only equipped participants with practical mountaineering skills but also instilled in them the values of discipline, resilience, and teamwork. Moving forward, it is imperative to build upon the achievements of this camp and continue to provide opportunities for NCC cadets to excel in the field of adventure and outdoor pursuits.

# ജ്ഞുവിന്റെ ഹിമവഴികൾ പിന്നിട്ട് ഉയരങ്ങളിലേക്ക് കുതിക്കാൻ ജനനി

കോട്ടയം 🔹 കശ്മീരിൽ ജനനിയെ കാ ത്തിരിക്കുന്നത് കഠിന പരിശീലനമാ ണ്. പക്ഷേ ആ വെല്ലുവിളി ഏറ്റെടു ക്കാനുള്ള ആവേശത്തിലാണ് ജനനി. ജമ്മു കശ്മീരിലെ പ്രതികൂല സാഹച ര്യങ്ങളിൽ സാഹസിക പരിശീലന ത്തിനായി കേരളത്തിൽ നിന്നു തിര ഞ്ഞെടുക്കപ്പെട്ട ഏക എൻസിസി കെഡറ്റാണ് ജനനി കനകരാജ്. മള്ളു ശേരി, കൃഷ്ണഭവനിൽ പരേതനായ എൻഎസ്.കനകരാജിന്റെ മകളും ബി സിഎം കോളജിലെ ഒന്നാം വർഷ ബി എസ്സി ഫിസിക്സ് വിദ്യാർഥിനിയു വിലെ പഹൽഗാം ജവാഹർ ഇൻസ്റ്റി മാണ്.

5 -ാം കേരള വനിതാ വിഭാഗം ബറ്റാ ലിയൻ എൻസിസി ചങ്ങനാശേരിയി നം. ചെങ്കുത്തായ മലകയറ്റം, വന ലെ കെഡ്റ്റാണ് ജനനി. ബറ്റാലിയനു ത്തിലൂടെയുള്ള സാഹസിക യാത്ര, കീഴിലുള്ള 4 കോളജുകളിൽ നിന്നും കെഡറ്റുമാരുടെ ശാരീരിക ക്ഷമതാ അതിജീവനം തുടങ്ങി വില്ലേജുകളി പരീക്ഷയിലാണ് ജനനിയെ തിരഞ്ഞെ ടുത്ത്.

15 ദിവസമാണ് പരിശീലനം. ജമ്മു

ജമ്മു കാശ്മീരിൽ സാഹസിക പരിശീലനത്തിനായി കേരളത്തിൽ നിന്ന് തിരഞ്ഞെടുക്കപ്പെട്ട ഏക എൻസിസി കെഡറ്റാണ് ജനനി

റ്റ്യൂട്ട് ഓഫ് മൗണ്ടനിയറിങ് ആൻഡ് വിന്റർ സ്പോർട്സിലാണു പരിശീല നദി മുറിച്ചു കടക്കൽ, വനത്തിലെ ലെ പരിശീലനം എന്നിവയും നടക്കും. പുല്ലരിക്കുന്ന് കോളനിയിലാണ് ജന നിയുടെ വീട്. ജനനിയെയും സഹോ



എൻസിസി കെഡറ്റ് ജനനി കനകരാജ് അമ്മ കൃഷ്ണമ്മയ്ക്കും സഹോദര ങ്ങളായ ജയകൃഷ്ണനും ജയകുമാറിനുമൊപ്പം.

ദരങ്ങളായ ജയകൃഷ്ണൻ, ജയകുമാർ എന്നിവരെയും അമ്മ കൃഷ്ണമ്മ വീ ടുകളിൽ ജോലി ചെയ്താണ് പഠിപ്പിക്കുന്നത്. ചെറുപ്പം മുതൽ കായിക രംഗ ത്ത് സജീവമായി പങ്കെടുക്കുന്ന ജന്നി സൈനിക സേവനമാണ് സപ്നം കാ ണുന്നത്. ബറ്റാലിയനിലെ കെഡറ്റ് പരിശീലകയായ സോമി ജയ്സണാണ് പരീശീലനത്തിനായി ജനനിക്ക് ഒപ്പം പോകുന്നത്. ജനനി ഇന്നു പുറപ്പെടും

#### Ms Janani Kanakaraj in Media

SPURIAR INSTITUTE OF MOUNTAINEERING & WINTER ST PAHALGAM, JAMMU & KASHMIR -192126 ADVENTURE COURSE REPORT Course Serial No.: 87 Duration: 18 Apr to 02 May 2022 Name: Cdt Janani Kanakaraj Sponsored by: Directorate General NCC, New Delhi Address: 5 Kerala Girls BN, NCC, Changanacherry General Remarks: A physically fit trainee, who displayed immense skills in various training activities like Rock Climbing, Rappelling, River Crossing, Trekking, Tent Pitching, Zip Wire etc during the course. Her overall performance was above average. "RECOMMENDED FOR BASIC MOUNTAINEERING COURSE" Grading Awarded: "A" (ALFA) "D" 85% & ABOVE K Bejoy (IS Thapa) Capt "A" 70% & 84% Colonel Officer In charge "B" 60% to 69% Principal "C" 40% to 59 % Training "U" Below 40%

Certificate

### NCC MOUNTAINEERING EXPEDITION REPORT ALL INDIA MOUNTAINEERING MT. YUNAM EXPEDITION

#### Date: 24/04/2023-26/06/2023

Location: Mt. Yunam, Himachal Pradesh

The NCC mountaineering expedition was organized with the objective of providing cadets with handson experience in mountaineering, fostering leadership skills, and promoting adventure sports within the National Cadet Corps. The expedition spanned over [24/04/2023-26/06/2023] 60 days and involved challenging trekking routes, technical climbs, and summit attempts on prominent peaks. Ms Janani Kanakaraj of III BSc Physics was one of the 19 participants for this adventurous expedition. The objectives of the course were to

• To provide practical training in mountaineering techniques and outdoor survival skills.

- To develop leadership qualities and teamwork among NCC cadets.
- To promote physical fitness, mental resilience, and self confidence among participants.

• To foster an appreciation for nature and environmental conservation.

Activities included.

- Pre-expedition Training: Cadets underwent comprehensive training in mountaineering fundamentals, including rope handling, navigation, campcraft, and first aid.
- Expedition Planning: Detailed planning and preparation were conducted, including route selection, equipment procurement, logistics coordination, and risk assessment.
- Trekking and Climbing: Cadets embarked on multi-day trekking routes, navigating through varied terrain and altitudes, and attempted technical climbs on designated peaks.
- Camp Life Participants experienced living in remote wilderness areas, practicing camp management, cooking, and outdoor survival skills.
- Leadership roles were assigned to cadets, allowing them to lead small teams during trekking and climbing activities, fostering decision-making, communication, and teamwork.
- Environmental Conservation: Cadets engaged in eco-friendly practices, such as waste management, minimizing environmental impact, and promoting Leave No Trace principles. The main achievements of the camp can be summed up as successful summit attempts on designated peaks, showcasing the technical proficiency and determination of the cadets. Improved physical fitness, mental resilience, and self-confidence among participants, evidenced by their performance

in challenging outdoor environments. Enhanced leadership qualities demonstrated by cadets in organizing and leading expedition teams, making sound decisions, and overcoming obstacles. Positive feedback received from instructors and expedition leaders regarding the discipline, teamwork, and spirit of adventure displayed by the cadets throughout the expedition.

Various challenges were also involved during the expedition like: Unpredictable weather conditions, including snowfall, high winds, and sudden changes in temperature, presented challenges during trekking and climbing activities. Terrain difficulties, such as steep ascents, icy slopes, and rocky terrain, required careful navigation and technical skill to ensure the safety of participants. Limited access to medical facilities and communication networks in remote areas necessitated thorough contingency planning and emergency preparedness.

The NCC mountaineering expedition was a resounding success, providing cadets with valuable opportunities for personal growth, skill development, and adventure. The expedition not only equipped participants with practical mountaineering skills but also instilled in them the values of leadership, teamwork, and environmental stewardship. Moving forward, it is essential to build upon the achievements of this expedition and continue to promote adventure sports and outdoor pursuits within the National Cadet Corps.





Mountaineering expedition to Mt. Yunam, Himachal Pradesh

### **NILGIRI HILLS TREKKING EXPEDITION 2023**

The All India Girls Trekking Expedition 2023 took place from May 06 to May 13, 2023 in the picturesque Nilgiri Hills of Tamil Nadu. The expedition comprised 768 NCC cadets from various regions including Kerala, Lakshadweep, Tamil Nadu, Andaman and Pondicherry, Karnataka, Goa, and Maharashtra. SGT Treesa K Devasia of III BSc Physics was also selected for this expedition. The participants embarked on a journey filled with adventure, exploration, and camaraderie.

#### Highlights of the Expedition:

During the eight-day expedition, the participants explored a variety of destinations on foot, including gardens, dams, parks, and temples. One of the most thrilling segments of the trek was the journey from Ketti to Ooty, which offered breathtaking scenery and unforgettable experiences.

Nilgiri Hills, often referred to as the Blue Mountains, are situated in Tamil Nadu, India. They are part of the Western Ghats. The Nilgiri Hills are renowned for their rich biodiversity, featuring lush forests, diverse wildlife, and numerous endemic species. The region enjoys a cool and pleasant climate throughout the year, making it an ideal destination for trekking and nature enthusiasts.

Ooty, short for Ootacamund, is a popular hill station nestled in the Nilgiri Hills. The native inhabitants of Ooty primarily belong to the Toda tribe, an indigenous community known for their distinctive culture and lifestyle. Ooty is famous for its picturesque landscapes, tea gardens, botanical gardens, and colonial-era architecture. The town attracts tourists from all over the world seeking tranquility and natural beauty.

Ketti is a scenic village located near Ooty, renowned for its verdant valleys and tea plantations. The local population of Ketti comprises individuals from various ethnic backgrounds, including Tamil and indigenous tribal communities. Ketti's economy revolves around agriculture, particularly tea cultivation, which contributes significantly to the region's livelihood.

The All India Girls Trekking Expedition 2023 provided an enriching experience for all participants, allowing them to immerse themselves in the stunning landscapes and diverse cultures of the Nilgiri Hills. The trek not only fostered physical endurance but also fostered a sense of camaraderie and appreciation for nature's beauty. Moreover, receiving the award of excellence from the Tamil Nadu CO was a testament to the participants' dedication and teamwork in successfully completing the event.



Ms. Treesa K Devasia Nilgiri Expedition

### INTERCOLLEGIATE SPORTS AND CULTURAL EVENTS/COMPETITIONS

Date of event	Name of the event	Name of the student participated
15/02/2024	PPT Competition at SB College, Changanassery	Mitra Vinda S Kumar
15/02/2024	Quiz competition, SB College, Changanassery	Sneha Sabu and Aleena Maria Santhosh

#### 

Competition	Name of the Student	Position
Hindi Poetry Writing	Ammu.K.Reji	2 nd
Kathaprasangam	Anna Elbi Simon	1 st
Hindi Recitation	Aswathy P	3 rd
English Recitation	Mitra Vinda S Kumar	3 rd
Group Song		3 rd

Physics department participated in ethnic walk organized by the college on 14/08/23.



Team of ethnic walk

Students of department has also participated in carol competition and crib making competition as part of Christmas celebrations.



Carol team

A team from department participated in Basketball competition, Tug of war and march Past on Sports Day and Physics department secured 1st prize in Basketball Competition.



Physics Department team for Procession of MG University Kalotsavam secured 3rd position in its interdepartmental competition.



Procession

### **ALUMNI ACTIVITIES**

### THE ALUMNE MEETING



NAAC ACCREDITED WITH A* GRADE (CGPA-3.46)

### DEPARTMENT OF PHYSICS

Invites You To Be The Part Of

# ALUMNAE MEET

### -2023-

"Happiness Is Meeting An Old Friend After A Long Time, And Feeling That Nothing Has Changed"

> DATE - 2/10/2023 TIME - 1:00 pm VENUE - Physics Lab



The alumnae meeting of our prestigious college was conducted on 02 October at BCM college auditorium. So, as a part of its extension the department of physics had conducted a meeting with the alumina of the department in the physics main lab.

The purpose of this meeting was to reconnect with former students, update them on college developments and discuss potential collaboration opportunities.

The meeting was lively from 1:00 pm to 3:00pm. The program began with a warm welcome to all alumni. The opening address was done by the Association president and the head of the department Dr Smitha Joseph. The welcome speech included her heartwarming gratitude for the alumni 's continued support and emphasizing the importance of their connection to the institution.

After the welcome address, a special dance performance of Sneha Sabu and Mitra Vinda S Kumar from third year was arranged and that made the meeting lively and enthusiastic. The next agenda of the meeting was the sharing of Alumni achievements and success stories.

Several distinguished alumni were invited to share their success stories. Their achievements served as an inspiration to current students and fellow alumni. An interactive session allowed alumni to provide suggestions, feedback and ideas for future collaborations. This segment encouraged open dialogue and brainstorming. The heartwarming message from the former head of the department and the beloved teacher Mrs. Susy Philip had made the flow of nostalgia to all the old students.

After the interaction session of the guests, there was a semi-classical dance performance by Ardra and Jislin from the second year. This made the people included in the session cheerful.

The meeting was concluded by the thanksgiving speech of the Secretary, Mitra Vinda S Kumar.

The alumnae meeting at physics department was a successful event that fostered a sense of community, pride and collaboration among former students. It served as a platform to strengthen the bond between the college and its alumni, ensuring their ongoing involvement and support.

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### THE DETAILS OF THE PARTICIPANTS

### FUNDS RECEIVED FROM ALUMNI/ PHILANTHROPERS/ EXTERNAL AGENCIES

Contribution from	Purpose	Amount (Rs.)
Alumni	Tuition Fees of Janai Kanakaraj, III DC Physics	30,000
Philanthropers	Research	5000

### GENDER SENSITIZATION

SEMINAR REPORT: REDEFINING GENDER ROLES RESPONSIBLE



Venue:Room no:314

Date:12 February 2024



Figure i: A Thoughtful Discussion on Redefining Gender Figure ii: Exploring New Perspectives on Gender Roles Roles.



Figure iii:Promoting Respectful Discourse on Gender Role Redefinition

The seminar on "Redefining Gender Roles Responsibly" held by Physics department of B.C.M Collage on 12th February 2024 at Room no.314 ,aimed to address the evolving landscape of gender roles in society and advocate for a more inclusive and equitable approach towards gender equality. The event, attended by students and faculty members, provided a platform for reflection on the significance of challenging traditional gender norms.

The seminar commenced with prayer song and welcome speech by our honourable Head of the department, Dr Smitha Joseph . The keynote address by Ms.ROSHNA N SHAD ,CPO 824,WOMEN POLICE BATTALION highlighting the importance of redefining gender roles in fostering a more just and inclusive society. The speaker emphasized the need for breaking stereotypes and promoting equal opportunities for all genders.

Interactive sessions provided attendees with opportunities to share personal experiences, ask questions, and engage in meaningful discussions on topics related to gender roles. The seminar also included awareness campaigns and initiatives aimed at raising awareness about gender equality and promoting respect for diverse gender identities.

Ms Ammu k Reji from 3rd DC, delivered vote of thanks and the department facilities presented a Memento as a token of love ,for the efforts made by Ms.Roshna N Shad for conducting the seminar class.

The seminar on "Redefining Gender Roles Responsibly" served as a catalyst for fostering a deeper understanding of gender dynamics and advocating for positive change. By challenging traditional norms and promoting inclusivity, attendees reaffirmed their commitment to building a more equitable and just society.

### THE DETAILS OF THE PARTICIPANTS

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# IMPORTANT DAYS OBSERVED

Sl. No	Name of the activity	No. of participants	No. of teachers attended	Place	Date
1	World Environment Day - Decorate Your Surroundings With Trees	5	3	At students respective houses	05-06- 23
2	Article Writing Competition - Drug Abuse Day	7	3	Room no.314	30-06- 2023
3	QuizProgrammeInAssociationWithInternational Moon Day	8	3	Room no. 314	19-07- 2023
4	Photography competition - Moon day	66	3	Online	20-07- 2023
<u>5</u>	Chart Exhibition - Hiroshima and Nagasaki Day	125	3	Front of Sr. Savio Hall	18-08- 2023
<u>6</u>	Science day	50	3	Govt.HS Kudamaloor	26-02- 2024

## WORLD ENVIRONMENT DAY - DECORATE YOUR SURROUNDINGS WITH TREES



trees.

The Physics Department at BCM College Kottayam celebrated World Environment Day on 5 June 2023 by a series of environmentally conscious initiatives, aligning with its commitment to sustainability and ecological well-being. Among the various activities organized, two standout events included a Tree Plantation Drive.

The Tree Plantation Drive, held on June 5th, saw enthusiastic participation from students, faculty, and staff members. Over 15 of native saplings were carefully planted in designated areas around the student's house. The initiative aimed not only to enhance the green cover but also to contribute towards combating climate change and promoting biodiversity. The event was both educational and inspiring, with experts giving insights into the significance of trees in carbon sequestration and ecosystem balance.

The event received overwhelming support and engagement from the Physics Department's community. The enthusiasm displayed by everyone involved underscored the shared commitment towards environmental stewardship. As we look forward, these initiatives serve as a testament to the department's dedication to sustainable practices and fostering a deeper connection with nature.

Through such endeavors, the Physics Department at BCM College Kottayam continues to exemplify its role not only as a center for academic excellence but also as a beacon of environmental consciousness within the community. The success of these initiatives sets a promising precedent for future endeavors in creating a greener, more sustainable environment for all.





"Trees are the lungs of humankind" 🜿 🔭 .

No.	NAME	CLASS		
1	Aleena Maria Santhosh	3rd DC Physics		
2	Athira Aniyachan	3rd DC Physics		
3	Mitra Vinda S Kumar	3rd DC Physics		
4	Ammu K Reji	3rd DC Physics		
5	Sneha Sabu	3rd DC Physics		
6	Megha H Karat	3rd DC Physics		
7	Jeleeta Lukose	2nd DC Physics		
8	Jislin Jose	2nd DC Physics		
9	Ardra Ranji P	2nd DC Physics		
10	Aswathy	2nd DC Physics		
11	Abhirami	2nd DC Physics		
12	Sneha Francis	3rd DC Physics		
13	Janani <u>Kanakaraj</u>	3rd DC Physics		
14	Shahina	2nd DC Physics		
15	Krishnanjali P J	2nd DC Physics		
16	Anna Elbi Simon	2nd DC Physics		
17	Induntiva	2nd DC Physics		
18	Surya G	3rd DC Physics		

Teacher in-charge: Ar Dr. Imitha Joseph

Ji. Dh. Imutha Joteph Department of Inguica Histop Chulapatantia Menorial College Kostagum-680 001

# **ARTICLE WRITING COMPETITION**



Article Writing Competition on the Experience Of Drug Abuse or on How to Prevent Drug Abuse Among Students FRULES • It Should Not Exceed 150 Words • Plagiarism Is Strictly Prohibited • Preferable Languages - English or Malayalam



The Department of Physics took a proactive step in commemorating World Drug Abuse Day by organizing an engaging and enlightening article writing competition. Held from the 30th of June to the 4th of July 2023, the competition aimed to raise awareness about the pressing issue of drug abuse and its profound impact on individuals and communities.

With the Physics Department serving as the backdrop, a drop box was set up, inviting students to share their heartfelt thoughts on the menace of drug abuse through their written pieces. The department's initiative garnered enthusiastic participation from seven dedicated students, all eager to contribute to the cause and make a positive difference. Each article was a unique testament to the student's perspectives and writing styles, giving the competition a rich tapestry of diverse voices and insights.

The topics covered by the participants ranged from the psychology behind addiction to the socioeconomic consequences of drug abuse on communities. Some delved into the harrowing tales of individuals who battled addiction, while others explored the role of education and prevention in curbing the drug epidemic. Every article sought to shed light on the dark realities of drug abuse and underscore the urgency of finding effective solutions.

The competition not only provided a platform for expression but also fostered a sense of responsibility among the students. As they immersed themselves in their research and writing, they gained a deeper understanding of the far-reaching consequences of drug abuse, which fueled their commitment to making a difference. The articles showcased the students' unwavering dedication to combating drug abuse, raising awareness, and fostering positive change.

As the Physics Department concluded the article writing competition, it stood as a testament to the power of education, awareness, and the importance of collective action. The students' voices had come together, forming a resounding chorus determined to break the chains of drug abuseand build a brighter, healthier future for all.

In the spirit of unity and shared purpose, the department vowed to continue hosting such initiatives in the future, empowering students to use their words as tools for change. The article writing competition had sown the seeds of awareness and compassion, ensuring that the fight against drug abuse would persist as a priority within the academic community and beyond.

The winners are:

First Prize - Gayathri R Nair of 2nd DC English M1

Second Prize – Hanna Saji of 3rd DC Sociology

Third Prize – Vijayakrishna M of 2nd DC Chemistry

#### THE DETAILS OF THE PARTICIPANTS

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QUIZ PROGRAMME IN ASSOCIATION WITH INTERNATIONAL MOON DAY



The Department Of Physics conducted a quiz programme on account of international moon day. The programme was held on 19 July 2023 at 1:00 pm in room no-314. The members of thephysics department arranged all the settings before starting the programme. The programme started with the presence of four groups with two members in each group. the first prize goes to Dhana Sarah Sajan and Anna Maria Baisil of 2nd dc Economics, second prize goes to Ann Maria Kuruvilla and Anns Maria Kuruvilla of 2nd dc Chemistry and third prize goes to Nandhana P Nair and Sneha Sairah Peter of 2nd dc Chemistry. participants wonderfully participated in this quiz competition.this programme helped them to know more about the moon. The quiz competition came to an end by 1:30 pm



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# DETAILS OF THE PARTICIPANTS

#### PHOTOGRAPHY CONTEST IN RELATION WITH MOON DAY



The Department of Physics organized an enthralling photography contest to celebrate the muchawaited Moon Day from July 17th to July 20th, 2023. The primary objective of this captivating event was to commemorate the historical significance of the Moon landing and to foster a deeper understanding of the Moon's role in shaping our planet and its importance in space exploration. Moreover, the contest aimed to ignite the curiosity of students and encourage them to delve into the wonders of the cosmos. The photography contest garnered an overwhelming response from students, amateur photographers, and space enthusiasts across college. It provided an exceptional platform for participants to showcase their artistic prowess and scientific understanding of the celestial body that has captured humanity's imagination for centuries. With the advent of modern technology, capturing the magnificence of the Moon has become more accessible than ever. Participants were armed sophisticated smartphones with advanced camera capabilities. This diversity allowed for a wide array of submissions, each offering a unique perspective on Earth's only natural satellite.

The submissions were nothing short of breathtaking. Each photograph depicted the Moon in its various phases, from the majestic full moon casting an ethereal glow to the delicate crescent moon gracefully adorning the night sky. Through this contest, the Department of Physics not only celebrated the spirit of Moon Day but also succeeded in piquing the curiosity

of students and the wider community about space exploration and astronomy. Participants, regardless of their age or background, had a chance to be part of an event that highlighted the significance of the Moon in shaping our understanding of the universe.

The winners of the contest are:

- 1st prize: Lidiya Lilly Philip of 3rd DC History
- 2nd prize: Hanna Saji of 3rd DC Sociology
- 3rd prize: Sona Mary Biju of 2nd DC Commerce



Sample photos in by students in photography contest

### **PARTICIPATION LIST**

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	_	List of students v	who participated in the pro	gram	
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	38	Archa Ravi	History	2021 2024	
	30	Alita Ann Corneva	Food science and quality control	1	
	40 1	Hanna Saia	Sociolaev	3	
	41 /	Angel Mariam Raju	BCM computer application	3	
	42	Amina Ayoob	B. Com computer Application	3 year	
	43 5	Shefita P A	Commerce of	2023	
	44 /	AMMU K REJI	Physics	3 rd year	
	45 /	Ann mary Aloysious	FSQC	3nd	
	46 1	Layana Yesudas	Bsc Food science and quality control	3rd	
	47 /	Anno Maria Baisil	Economics	2	
	48 5	Sanjana saju	Commerce	2nd	
	49 1	Devika P R	History	3nd	
	50 /	Athulyamol Thulasi	Chemistry	3 DC	
	51 /	Aswathy: P	Bse Physics	3	
	52 1	Bhavana Binu	Zoology	3rd year	
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# EXHIBITION ON SUSTAINABLE DEVELOPMENT- THE CONTEXT OF HIROSHIMA AND NAGASAKI DAY OBSERVANCE



#### Brochure

The Department of Physics conducted a chart exhibition on the sustainable development context of Hiroshima and Nagasaki day observance in association with Breakthrough Science Society. The programme was held on 18 August 2023 at 12:30 pm in front of Sr. Savio hall.

The exhibition was conducted to create awareness on the impact of the Hiroshima atom bomb blast among the people.

The exhibition was inaugurated by Dr. T M Joseph the former Principal of Newman College, Thodupuzha and Nirmala College, Muvattupuzha and the Academic Director of B C M College, Kottayam. Felicitation was conveyed by Breakthrough Science Society member and retired teacher Ms. Shamly Jose.

The exhibition was completed successfully. Teachers and students of all the departments visited and were enlighted. They commented that they got more information about the situation. Students from St.

Annes GHSS also participated in this exhibition. Visitors praised the exhibits which were educative and informative. The exhibition was a success because a large number of people attended it.





## LIST OF PARTICIPANTS

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EXPERIMENTAL CLASS AND QUIZ COMPETITION ON NATIONAL SCIENCE DAY



On the occasion of National Science Day, celebrated on 28th February annually to commemorate the discovery of the Raman effect by Indian physicist Sir C.V. Raman, an experimental class and quiz competition were organized by Arpitha Chandran and Josna B. Pradeep, from the 1st-year Physics Department. The event took place on 28th February 2024, on 2:00 pm at Government HSS, Kudamaloor, Kottayam.

The primary objective of the event was to promote scientific curiosity and knowledge among students from 5th to 9th standard. The experimental class aimed to provide students with hands-on experience and practical insights into various scientific phenomena. Through engaging demonstrations and interactive sessions, students were introduced to fundamental scientific principles in a fun and accessible manner. Following the experimental class, a quiz competition was conducted to test the students' understanding of scientific concepts and their ability to apply knowledge in problem-solving scenarios. The quiz encompassed topics ranging from physics, chemistry, biology, to general science, challenging participants to think critically and analytically.

Students from 5th to 9th standard enthusiastically participated in both the experimental class and the quiz competition. Their eagerness to learn and engage with scientific concepts was evident throughout the event. The experimental class featured captivating demonstrations, such as optical illusions, simple experiments on electricity and magnetism, and chemical reactions, capturing the attention and imagination of the students. The quiz competition sparked a spirit of healthy competition among the participants, fostering teamwork and camaraderie as students collaborated to answer questions.

The experimental class and quiz competition on National Science Day proved to be a resounding success, inspiring young minds to explore the wonders of science and igniting a passion for learning.



#### Activities inculcating human values

Sl. No	Name of the activity	No. of participants	No. of teachers attended	Place	Date
1.	Food Donation	12	1	Kottayam town	13-10- 2023
2	Feeding Birds Campaign	5	1	At students respective houses	05-01-24

# FOOD DONATION EVENT REPORT





On October 13, 2023, a food donation event took place at Kottayam Town at 12:00pm. The initiative aimed to address food insecurity in the community by distributing donated food items to those in need. The event was organized by Physics Department.

A diverse range of non-perishable and perishable food items were collected. The generosity of the donors allowed for a well-rounded assortment of items to be distributed.

The distribution process was organized efficiently, with volunteers sorting and packaging the donated items into individual food bags. Recipients were then able to pick up their food bags while adhering to social distancing and safety protocols.

The event garnered positive feedback from both donors and recipients. Many expressed gratitude for the opportunity to support and receive assistance within the community, fostering a sense of unity and shared.

Despite the overall success of the event, there were some challenges, such as logistical issues and varying dietary preferences. These were addressed through effective communication and flexibility in the distribution process.

The food donation event on October 13, 2023, proved to be a meaningful and impactful initiative, bringing together the community to address food insecurity. The collaborative efforts of organizers, volunteers, and donors contributed to the success of the event, emphasizing the importance of collective action in supporting those in need.

#### THE DETAILS OF PARTICIPANTS

Name	Class
Aleena Maria Santhosh	3 rd DC Physics
Ammu K Reji	3 rd DC Physics
Sneha Sabu	3 rd DC Physics
Janani Kanakaraj	3 rd DC Physics
Aswathy P	3 rd DC Physics
Josiya George	3 rd DC Physics
Megha H Karat	3 rd DC Physics
Sneha Francis	3 rd DC Physics
Geetha R	3 rd DC Physics
Jeleeta Lukose	2 nd DC Physics
Jislin Jose	2 nd DC Physics
Ardra Ranji P	2 nd DC Physics

f.

Signature HOD of the Physics Department:

Dr. Smitha Joseph

Signature of Coordinator:

Ms Tinu Ann Jose

FEEDING BIRDSCAMPAIGN



On January 5th, the Physics Department of BCM College, Kottayam, celebrated on a heartwarming initiative to mark Bird Day. With a mission to foster compassion towards our feathered friends, the department organized a day of feeding birds at students' houses.

The event kicked off with enthusiastic students gathering at the college premises, armed with bird feeders and bags of nutritious grains.

As they arrived at their house, a sense of anticipation filled the air. Students carefully placed feeders in strategic spots, ensuring easy access for birds of all sizes. Bright smiles and cheerful chatter accompanied this act of kindness, creating an atmosphere of camaraderie and community spirit.

The flutter of wings and chirping melodies soon filled the air as grateful birds flocked to partake in the offerings. It was a sight to behold, as students observed the avian visitors with fascination and joy.

This initiative not only provided essential nourishment for the birds but also instilled a sense of environmental responsibility and empathy among the participants. As the day drew to a close, the Physics Department of BCM College, Kottayam, stood proud, knowing they had made a meaningful impact on both the avian residents and the student community alike.

In a world often bustling with activity, this celebration of Bird Day served as a gentle reminder of the beauty and importance of our feathered companions, inspiring all to cherish and protect the wildlife that surrounds us.



# THE DETAILS OF THE PARTICIPANTS

No.	NAME	CLASS
1	Aleena Maria Santhosh	3rd DC Physics
2	Athira Aniyachan	3rd DC Physics
3	Ammu K Reji	3rd DC Physics
4	Jislin Jose	2nd DC Physics
5	Ardra Ranji P	2nd DC Physics
		· · ·

Teacher in-charge: J1 Dr. Smitha Joseph

Dk : Imitha Jofeff Head in Charge Department of Physics Bishop Chulaparambal Memorial College Kottayam-686 001

# ACTIVITIES FOR THE STUDENTS FROM THE WEAKER SECTIONS

#### **REMEDIAL TEACHING**

The remedial class was conducted to provide additional support and assistance to students from the weaker sections who require extra help in understanding the subject matter. The class consisted of students from various grades who were identified as needing additional academic support on 8 February 2024 at room no.314.

The class was conducted by the head of the department, Dr Smitha Joseph. The class began with a diagnostic assessment to gauge the individual needs of each student and identify specific areas of weakness. Based on the assessment results, tailored instruction was provided to address the identified learning gaps. This included one-on-one guidance, small group activities, and targeted exercises.

The remedial class resulted in an increased understanding of key concepts among participating students. Improved confidence and motivation to learn. Overall, the remedial class was a valuable opportunity to provide personalized support and promote academic success among students from the weaker sevctions.



## THE DETAILS OF THE PARTICIPANTS

SI. No.	NAME	CLASS		
1	Mitra Vinda S Kumar	3 rd DC Physics		
2	Ammu K Reji	3 rd DC Physics		
3	Sneha Sabu	3 rd DC Physics		
4	Athira Aniyachan	3 rd DC Physics		
5	Aleena Maria Santhosh	3 rd DC Physics		
6	Treesa K Devasia	3 rd DC Physics		
7	Josiya George	3 rd DC Physics		
8	Geetha R	3 rd DC Physics		

Teacher in-charge: A. Dr. Smitha Joseph

h. De Imitha Joseph Head in Charge

Head in Charge Department of Physics Bishop Chulaparambit Memorial College Kottayam-686 001

#### **REMEDIAL TEACHING**

The remedial class was conducted with the aim of providing additional support and assistance to students from the weaker sections who require extra help in understanding the subject matter. The class consisted of students from various grades who were identified as needing additional academic support on 10 January 2024 at physics lab.

The class was conducted by our class teacher Dr. Elizabeth V John. The class began with a diagnostic assessment to gauge the individual needs of each student and identify specific areas of weakness .Based on the assessment results, tailored instruction was provided to address the identified learning gaps. This included one-on-one guidance, small group activities, and targeted exercises.



# THE DETAILS OF PARTICIPANTS

No.	NAME	CLASS
1	Anna Elbi Simon	2 nd DC Physics
2	Shahina	2 nd DC Physics
3	Aswathy	2 nd DC Physics
4	Abhirami S Vinod	2 nd DC Physics
5	Ardra Ranji P	2 nd DC Physics

Teacher in-charge: A. Dr. Smitha Joseph

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Dh. Smitha Joseph Head in Charge Department of Physics Bishop Chulaparambil Menorial College Kottayam-686 001

## **ACTIVITIES TO PROMOTE CONSTITUTIONAL VALUES**

#### **SEMINAR :- HUMAN RIGHTS**

The Physics Department organized a seminar focusing on the topic of human rights, aiming to raise awareness and foster discussion on fundamental rights and freedoms. The seminar was held on 2nd November 2023 at room no .314 ,commenced with prayer song and welcome speech by our honourable Head of the department, Dr Smitha Joseph.

Ms. Ardra Anil Kumar delved the concept of human rights, emphasizing their universality and inherent to all individuals regardless of race, gender, religion, nationality, or other status. The significance of human rights in promoting dignity, equality, and justice was highlighted.. A historical overview of the evolution of human rights was presented, tracing the development of international instruments such as the Universal Declaration of Human Rights, treaties, and conventions aimed at protecting and promoting human rights at the global level. The seminar explored key principles and categories of human rights, including civil and political rights (such as freedom of speech, assembly, and religion), economic, social, and cultural rights (such as the right to education, healthcare, and work), as well as collective rights and the rights of vulnerable groups.

The seminar concluded with a call to action for promoting a culture of respect for human rights in all spheres of society, urging participants to advocate for justice, equality, and dignity for all. It emphasized the collective responsibility of individuals, institutions, and governments in upholding and protecting human rights. Overall, the seminar provided a platform for meaningful dialogue and reflection on the importance of human rights in shaping a just and equitable world, inspiring participants to contribute to the advancement of human rights principles in their respective fields and communities.



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8	JANANI KANAKARAJ		- Anno	
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27	ANUCRALIA LINUXAN		A	
27	SELMA SELVAM			
20			Jen-	
29	JOSINA B PRADEEP		Jon Jos	
30	APARNA M REJI		Adam	
31	VARGHESE		The	- fr

Head in Charge Department of Physics Bishop Chulaparambil Memorial College Kottayam-686 001

# PROCESSION



A vibrant procession marked the word Republic in Constitution by the students of Physics Department, resonating with patriotic fervor and communal harmony as an inaugural ceremony of 2024 Youth Festival held by Mahatma Gandhi University. The event showcased a diverse array of cultural performances, speeches, and displays highlighting the values enshrined in the constitution.

The procession commenced was held on 26th February, 2024 from the police parade ground to Thirunakara Maidanam symbolizing the sovereignty and unity of the nation. The union members of MGU led the procession, underscoring the collective commitment to upholding constitutional principles. Participants from different colleges and cultural backgrounds adorned traditional attire, reflecting the rich tapestry of the nation's heritage. Folk dance performances captivated spectators, fostering a sense of cultural unity and pride among attendees.

Throughout the procession, various art forms were showcased to demonstrate the power of creative expression in challenging political oppression and fostering social change. Theatrical performances and various art forms served as poignant reminders of the transformative potential of art in shaping public discourse and consciousness. Participants engaged in thought-provoking discussions and debates on the role of art in society, exploring ways to reclaim artistic spaces from the clutches of bad politics.

Overall, the protest procession against bad politics in art forms served as a rallying cry for justice, integrity, and creative freedom from the actions or practices within the political realm that are deemed unethical, corrupt, divisive, or harmful to society.





## THE DETAILS OF THE PARTICIPANTS

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SL. No.	Name of student	Class	Signature	
1	ALEENA MARIA SANTHOSH		China -	
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Da. Imitha Joseph

DA Grandba Tefef Head in Charge Department of Physica Binhap Cludsparambil Memorial College Kattayaan 0.06 001
# ACTIVITIES TO PROMOTE ENVIRONMENTAL SUSTAINABILITY

#### **POWER QUIZ**





#### **Report of the Activity**

The Power Quiz, conducted in association with the Kerala State Electricity Board (KSEB), proved to be an enlightening and engaging event aimed at enhancing awareness and knowledge about powerrelated topics. Held in room no. 314 on 21st November 2023, the quiz attracted participants from various educational institutions and backgrounds. The quiz comprised multiple rounds covering a wide range of topics related to electricity generation, distribution, conservation, and renewable energy sources. Participants showcased their expertise and enthusiasm as they tackled challenging questions and competed for the coveted title.

In addition to fostering healthy competition, the Power Quiz served as an educational platform, providing participants with valuable insights into the intricacies of the power sector and its significance in modern society. The collaboration with KSEB ensured that the quiz incorporated current trends, regulations, and initiatives in the field of energy. Moreover, the event facilitated networking opportunities and encouraged collaboration among participants, educators, and industry professionals. It promoted a culture of learning and innovation while highlighting the importance of sustainable energy practices.

In conclusion, the Power Quiz, conducted in partnership with KSEB, proved to be a resounding success, achieving its objectives of promoting awareness and fostering interest in power-related topics. The event exemplified the potential of collaborative efforts in advancing knowledge and addressing contemporary challenges in the energy sector.

#### **DETAILS OF PARTICIPANTS**

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# MAJOR GREEN INITIATIVES OF THE DEPARTMENT

#### LED BULB ASSEMBLING



The Physics Department of BCM College, Kottayam, organized a hands-on workshop on LED assembling on the dates 19th February of 2024, 21st of February, 2024. The event aimed to provide students with practical experience in understanding the technology behind LED bulbs and their assembly process. Students were trained by Mr.Tom Simon, Lab Mechanic, Physics Department, BCM College Kottayam. The training was given to III DC, II DC and I DC students of B.Sc Physics course. Sir also taught the students the repairing mechanism of worn out bulbs. The teacher in charge of the program is Dr.Smitha Joseph and the student coordinator is Ammu K Reji from III DC Physics.

The primary objective of the event was to enhance students' understanding of LED lighting technology and components, working principles, and assembly techniques. By actively participating in the assembly process, students were expected to gain insights into the practical applications of physics concepts. The workshop commenced with an introductory session on LED technology, covering topics such as semiconductor physics, light emission mechanisms, and the advantages of LEDs over traditional lighting sources. This theoretical foundation provided attendees with a comprehensive understanding of the underlying principles.

The LED bulb assembling event proved to be a resounding success, with participants gaining practical experience in assembling LED bulbs from scratch. Through hands-on learning, students not only enhanced their technical skills but also deepened their understanding of the physics concepts underlying LED technology. Few of the assembled LED bulbs were donated to various families who stay near the colony beneath the Nagambadam bridge, Kottayam.



# THE PAPER BAG MAKING COMPETITION IN COMMEMORATION OF INTERNATIONAL PLASTIC BAG FREE DAY



# RULES FOR THE PAPER BAG MAKING COMPETITION

- Any Type Of Paper Can Be Used For Making The Paper Bag
- Participants Should Bring Necessary Items
- A Time Limit Of 25 Minutes Will Be Assigned
- From A Department, Any Number Of Students Can Participate
- The Most Appealing Paper Bags Will Be Awarded First Place





Preserving the planet with paper: students showcase their skills in paper bag making



The Moment of Truth: Judging the Creativity and Ingenuity of Paper Bag Crafters.

The Department of Physics at our esteemed institution took a remarkable step towards promoting environmental consciousness by organizing a paper bag making competition as part of the International Plastic Bag Free Day initiative. Held on the 4th of July 2023, in the inviting ambiance of Room 314, the competition aimed to raise awareness about the significance of paper bags and motivate the reduced use of plastics in our daily lives.

With the clock ticking from 12:55 pm to 1:25 pm, the competition witnessed the enthusiastic participation of 13 talented individuals from various departments. The air was charged with excitement as each participant brought their creative flair to the forefront, weaving wonders out of simple materials.

The allotted time proved to be a testimony to the participant's dedication and skills as they meticulously crafted paper bags that not only served their purpose but also captivated the eyes with their aesthetic appeal. It was heartening to witness how art and sustainability effortlessly merged in their designs, showcasing a blend of basic, colorful, and sophisticated patterns.

Guiding the event as the esteemed judge was Dr. Naveena J Narithookil, the Head of the Hindi Department. Her extensive experience and expertise added a touch of prestige to the competition. As the participants presented their creations, she keenly scrutinized each bag, appreciating the effort and ingenuity put into their making.

However, the competition was fierce, and making a final decision proved to be an arduous task. The paper bags showcased an impressive range of designs, making it challenging to single out the winners. Dr. Naveena J Narithookil exhibited an unbiased and discerning eye, acknowledging the intricacies of every creation.

Beyond just an event, it was a moment to reflect on the dire need to reduce plastic usage and embrace ecofriendly alternatives. The competition inspired a sense of responsibility and creativity among the participants and spectators alike.

Such initiatives not only contribute to the preservation of our planet but also exemplify the collective efforts of our academic community towards fostering a sustainable future. As we celebrate the success of this competition, let us carry the message of environmental consciousness in our hearts and continue to make a positive impact on the world around us.

Winners

First Prize : Keerthy Lakshmi Raj of 3rd DC English M₁ Second Prize : Renu Kanwar of 3rd DC Commerce Third Prize : Diya David of 3rd DC English M₁

### THE DETAILS OF THE PARTICIPANTS

	PAPER BAG MAKING COMPETITION	J.			
	DAIL : 04/07/2023		57		
	TIME 12:55 PM				
	VENUE: ROOM NJ : 314				
No.	Name	Year	Department	Sign	
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3.	Anna Elbi Simon	and	Physics	fma	
<u> </u>	Diya David	grd	English MC	14	
<u> </u>	Rinu Kanwan	2rd	Commune	-01-	
6.	Sruha A.K	and	Knglish ML	Dr.	
<u> </u>	Sruthimol	and	Kaglish ML	- Sur	
- 8.	Sanamal Joseph	and	English MI	Sona '	
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