

PRAGYAAN



PHYSICS ASSOCIATION REPORT

2019-20

It gives me immense pleasure to present the report on the activities of Physics Association “PRAGYAAN” for the academic year 2019-20.

Donamol Abraham
Secretary
Physics Association 2019-20

PRAGYAAN

PRAGYAAN means wisdom, the quality of having experience, knowledge, and good judgement; the quality of being wise. Thus, aim of the Physics association 'PRAGYAAN' is to enable the students to be sensible and develop wise thinking by experience the developments within the society or period. Knowledge from the book is enough for the academic excellence but for being a good citizen everyone needs to interact with the society. Apart from imparting subject knowledge, the association aims to improve the character of the students with good civic sense, compassion and empathy to the poor and the sick. It also aims to mould the students as good citizens.

We are really proud to say that we have sincerely tried to exploit all the resources at our disposal for the success of the association. 'PRAGYAAN' played an important role in the internal and external development of students. We are grateful to all the faculty members and students of the Physics association for their whole-hearted cooperation in making pragyaaan a memorable success.

The annual report of Physics association, PRAGYAAN for the year 2019-2020 is submitted herewith.

OFFICE BEARERS

PRAGYAAN 2019-20



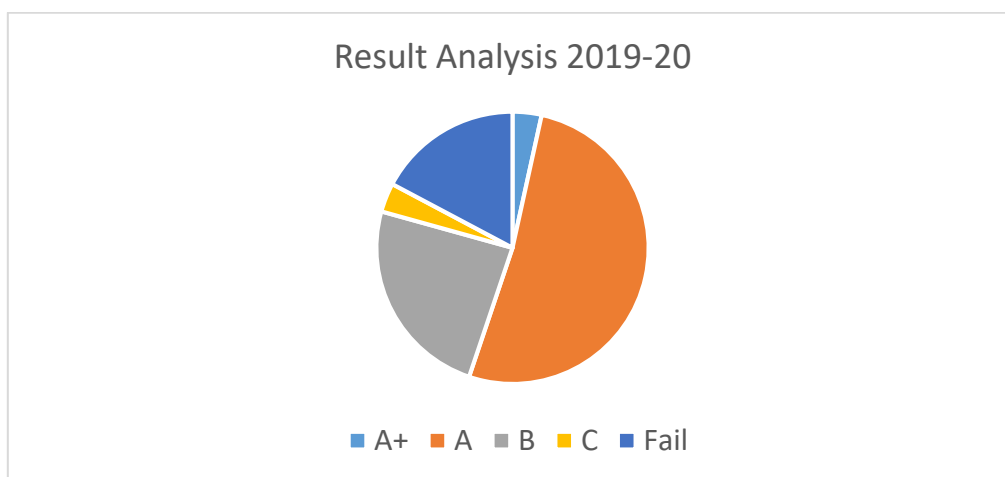
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|-----------------------|--|
| President | : Ms. Christy Philip, III DC Physics |
| Secretary | : Ms Donamol Abraham, III DC Physics |
| Vice President | : Ms. Shilpa Susan Thomas |
| Treasurer | : Sr. Jinnu C & Ms. Ardra Dhanajayan |
| Hand Written Magazine | : Ms Raiza Rebecca Jacob & Ms Ameesha S. |
| Teacher in-charge | : Ms. Ashly Sunny |

1. ACADEMIC PERFORMANCE
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SPEAK LANGUAGES OTHER THAN MALAYALAM AND ENGLISH

1. ACADEMIC PERFORMANCE

A+ HOLDERS

The year 2018-2019 was of academic excellence. Our students have come out with flying colours in their academic performance. During the academic year the pass percentage for BSc Physics programme was 82.7% and Ms .Chilby Anna Abraham secured A+ grade, fifteen students secured A grade, seven students secured B grade, and one student secured C grade out of total 29 students who appeared for the final year BSc examination conducted by MGU.



Chilby Anna Abraham: 9.28 (A+)

PHYSICS TRAINING AND TALENT SEARCH (PTTS)- 2019

Ms. Raiza Rebecca Jacob and Harsha mol R of III DC Physics were selected to the National Level Physics Training And Talent Search (PTTS)- 2019 held at Manipal Institute of Technology, Manipal, Karnataka during 23rd May to 12th June, 2019. They received a one-month fellowship of Rs. 20000/- (including book, accessories, food and accommodation) each. It was a great experience and exposure to the real world of Physics. They developed soft skill and learned life lessons too.





MANIPAL
ACADEMY of HIGHER EDUCATION
(Licensed by the University under Section 3 of the U.G. Act, 1956)



PHYSICS TRAINING AND TALENT SEARCH

CERTIFICATE OF PARTICIPATION

This is to certify that

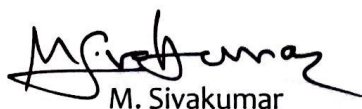
Mr./Ms. **RAIZA REBECCA JACOB** of

..... **B.C.M.COOLEGE, KOTTAYAM**

has participated in Physics Training and Talent Search (PTTS 2019),
a three week residential programme for BSc students (Level 1)
held at Manipal Institute of Technology, MAHE Manipal during
23rd May to 12th June 2019.

Funded by

Infosys Science Foundation



M. Sivakumar

Chief Coordinator, PTTS 2019



Mahesha M G

Local Coordinator, PTTS 2019



MANIPAL
ACADEMY of HIGHER EDUCATION
(Deemed to be University under Section 3 of the UGC Act, 1956)



PHYSICS TRAINING AND TALENT SEARCH

CERTIFICATE OF PARTICIPATION

This is to certify that

Mr./Ms. **HARSHA MOL R** of

..... **B.C.M.COOLEGE, KOTTAYAM**

has participated in Physics Training and Talent Search (PTTS 2019),

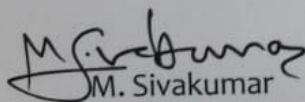
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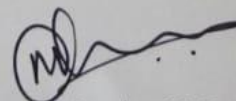
23rd May to 12th June 2019.

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M. Sivakumar

Chief Coordinator, PTTS 2019



Mahesha M G

Local Coordinator, PTTS 2019

2. SEMINAR/WORKSHOPS CONDUCTED

NATIONAL SEMINAR ON CLIMATE CHANGE

On 21st January 2020, Dept of Physics conducted a national seminar on climate change - one of the most relevant topics of this era. The seminar began with a prayer song. Mrs Smitha Joseph, HOD welcomed the gathering and Ms. Ardra Dhanajayan introduced the speaker. The seminar was inaugurated by Dr. M. R Ramesh Kumar, Chief Scientist (Rtd.) & Head, Physical Oceanography Department, National Institute Oceanography, Goa and also was the resource person of the program and his talk on the subject was of great interest. The seminar was highly interactive and students were enthusiastic throughout. It created a very deep awareness in students about the alarming conditions of Climate Change. The questions from the audience were a proof that they are well aware of the situation and ready to make changes for the Planet Earth. 90 students attended the seminar. Ms. Christy Philip, Physics association president delivered the vote of thanks. The program concluded at 4 pm with National Anthem.



The poster features a central image of a hand holding a globe, with the left side of the globe showing a fiery, orange-red sky and the right side showing a blue sky with white clouds. The text is overlaid on this image. At the top, it says 'National Seminar' in white. Below that, 'on Climate Change' in green. Then 'Organized by IQAC &' in red and blue. The main text reads 'Department of Physics B.C.M College, Kottayam' in blue. Below that, 'Date-24/01/2020' in red and 'Venue- Room No.212' in blue. At the bottom right, it lists 'Dr. M. R. Ramesh Kumar Chief Scientist (Rtd.) & Head, POD, NIO, Goa' in white. On the bottom left, there is a small portrait of Dr. M. R. Ramesh Kumar.

National Seminar
on
Climate Change
Organized by
IQAC
&
Department of Physics
B.C.M College, Kottayam
Date-24/01/2020
Venue- Room No.212
Dr. M. R. Ramesh Kumar
Chief Scientist (Rtd.) & Head, POD, NIO, Goa





ONE DAY WORKSHOP ON QUATUM MECHANICS

The Department of Physics, BCM College, Kottayam, organised ONE DAY WORKSHOP ON QUATUM MECHANICS on 4th October 2019 with an aim to develop an interest on theoretical Physics among the students. The program commenced with the inaugural ceremony by involving the blessing of the almighty in the form of lighting of the auspicious lamp by the chief guest Dr C S Praveen, INSPIRE faculty, CUSAT.

Dr C S Praveen started his session by rapid question answer round. This different style made the students more energetic and more attentive. "QUATUM MECHANICS" a theoretical paper which was tough to understand. The Dr C S Praveen made it simple through his skilful explanations and demonstrations. This made the students to understand the topic very deeply. He explained various topics like 'Plank's radiation formula, Hermitian function, Ehrenfest theorem, Schrodinger equations, Particle in one dimensional box, Tunnelling effect'. Moreover, this workshop inspires the students to take theoretical physics for their higher studies.

At the end of the program, Dr C S Praveen was gifted with a solar lamp assembled by the students to show our respect and happiness. The program concluded at 4 pm with National Anthem.

$|D(T, e, a, b)| \leq 2$

One day Workshop on Quantum Mechanics

organised by
Department of Physics
BCM College, Kottayam

on
October 04, 2019

Resource Person: Dr. C. S. Praveen
INSPIRE Faculty, CUSAT

$\det(M^*) = \det(M) + c \det(M^*) = \det(M)$ $\ln(x \pm y) = \frac{1}{2\pi} \left[\sqrt{z} e^{-\frac{x^2}{z}} - e^{-y^2} \right]$ $|M(\epsilon_m, \epsilon_m)| \leq C_2 \sqrt{\frac{\ln}{m - \epsilon}}$



WORKSHOP ON CRO WORKING AND MAINTENANCE

A workshop on the working and maintenance of CRO was conducted by the Mr. Tojo Joseph, Technical Officer, Meditronix Technical Services, Kavalpura, Kollam on 29th August 2019. 30 students of third year batch attended the session. It was a very helpful session and students mastered the basics of working with CRO for their laboratory experiments. They described the parts, working and maintenance in simple language. The resource persons have nearly ten years of experience and they handled the workshop very well.



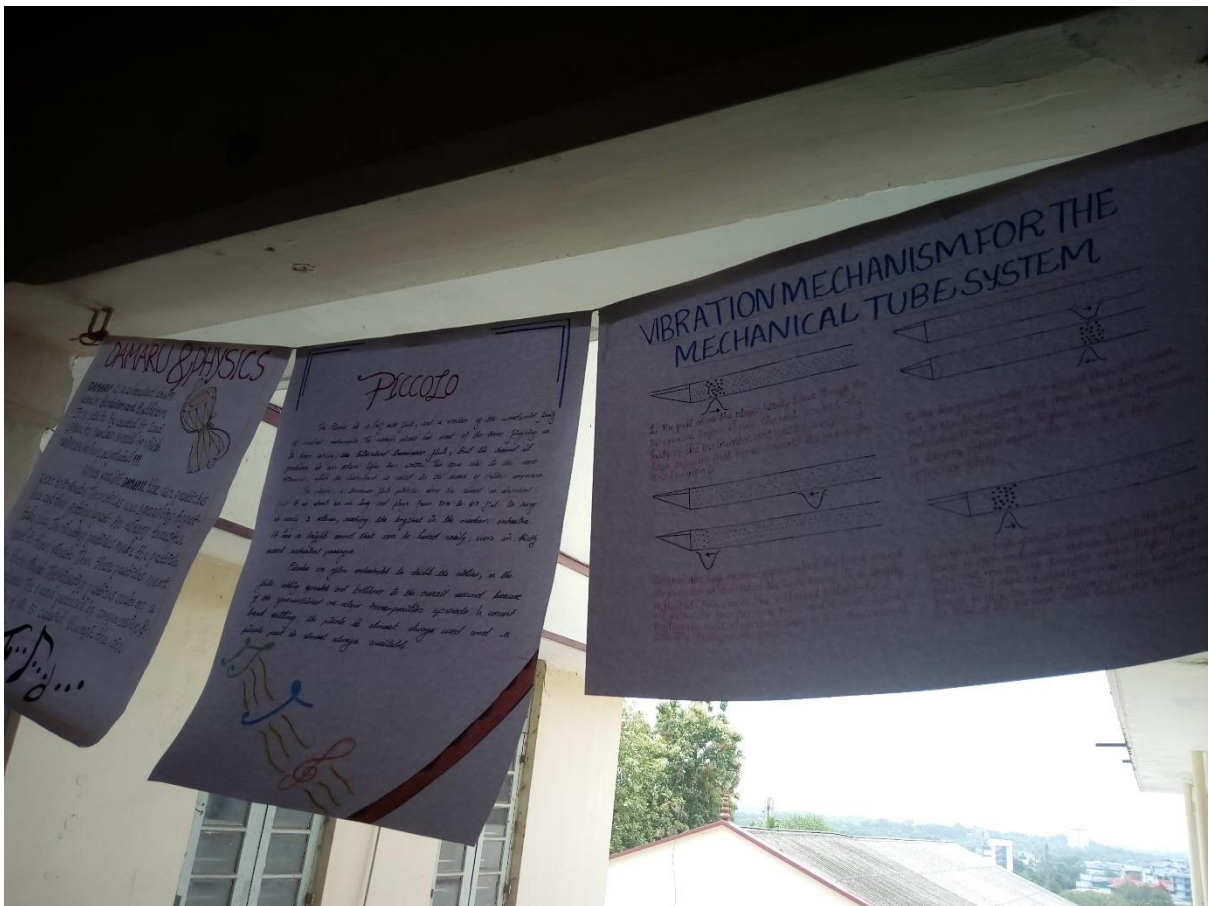
3. DAYS OBSERVED

MUSIC DAY – JUNE 24

Music is the best way to express the feelings of our heart. But there is something which is very interesting for a person who loves Physics in the world of music. Each and every phenomenon in the world is directly or indirectly related to Physics. Department of Physics has organized a chart exhibition on the topic “PHYSICS BEHIND THE MUSICAL INSTRUMENTS”. Our aim was to make others familiar with these interesting facts.

The exhibition was inaugurated by our beloved principal Prof. Dr TEENA ANNA THOMAS. The event was conducted from 10 am to 3 pm on June 24th, 2019. The students from various departments of the College curiously watched each and every chart in this exhibition.





MADAM CURIE DAY -JULY 5

Wonders are the part of world but miracles make the world a little more meaningful. Mary Curie and her family was such a miracle. She is the only woman who got Nobel Prize in two different subjects. The only family with all the four members was awarded Nobel Prize. She suffered a lot to get good education which was denied to her because of her gender. We all know how the discovery of radio-activity changed the world. Madam Curie has given her life as the price of this invention. The world especially scientific world is indebted to Madam Curie. We the department of Physics and Chemistry in association with 'BREAK THROUGH SCIENCE SOCIETY' conducted a talk on Madam Curie's struggles and achievements. The class was taken by Sri P. G. Sasikumar, Retd Scientist, Rubber Research Institute. It was both informative and thought invoking. All the girls were greatly inspired by the life of Madam Mary Curie.

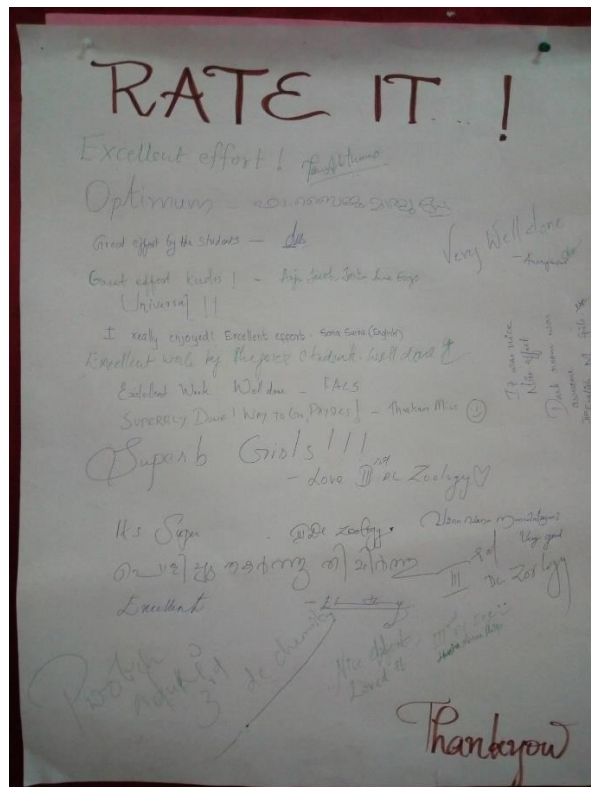




LUNAR DAY – JULY 19

Moon was once too far from us. But on July 21st 1969 NEIL AMSTRONG and his colleagues brought it under the foot of mankind. We can celebrate this great victory. As a part of lunar day an exhibition of the model of PSLV and the rocket parts was conducted on July 19, 2019. The program was inaugurated by our beloved principal Prof. Dr TEENA ANNA THOMAS. Along with this a chart exhibition was also conducted. Charts were about space research and history of space travel. The students from St ANNE’S HSS, KOTTAYAM along with their teachers got a chance take part in this exhibition. Almost 300 students and teachers of our college also participated in this program. A spot quiz competition and some games were held for the viewers. The games added fun to the program while the quiz raised the curiosity. The kids were so enthusiastic about the space and after watching the models and charts their smile meant a lot for us. It proved that space and its secrets are always interesting to man.





TEACHERS' DAY- SEPT 5

Education is the key to success in life and teachers make a lasting impact in the lives of their students. A “good citizen” is a fruit of a “good Teacher”. We are greatly obliged to give them respect and recognition. Students of Physics department celebrated, teachers’ day, named “GURU VANDANAM” on September 5, as a tribute to our teachers.

As a part of teacher’s day, students of the department organized a “malayali manka” competition for our teachers and non- teaching staff of the department. Our lab assistant ‘Mrs. Lissy Joseph’ has won the title.



ONAM CELEBRATION-SEPT 6

The festival of happiness and fraternity “ONAM” was celebrated by physics department on September 6th, 2019. Various programs including Onapattu and Onasandhesham were a part of this. Donamol Abraham and Parvathy Salimkumar of 3rd DC Physics participated in the Malayalimanka competition organized by College Union. The fabulous celebration comes to an end with a delicious “Onasadhya”.



CHRISTMAS CELEBRATION

Students of physics Dept. celebrated the holy festival on 20th December, 2019. All the students gathered to share their Christmas feelings and were enthusiastic to decorate the department beautifully. The students sang carol songs and danced.

Christmas card making and quiz competitions were conducted. Teachers also participated with the students. To inculcate the spirit of sharing, a small Christmas gifts were shared with each other. The joy of celebrating Christmas was visible on everybody's faces. Ms. Nandana Vijay, I DC Physics won first prize for card making, Akhila G Nair, I DC Physics secured second prize and Keerthana V, I DC Physics secured third prize for the same.





NATIONAL SCIENCE DAY – FEB 1

National science day is celebrated every year to commemorate the discovery of Raman Effect on February 28th by Sir CV Raman for which he was awarded Nobel Prize in the year 1928. The day is celebrated most proudly by every Indians. The theme of this year's National Science day was "Women in Science". The theme was a call to remember the contributions of women scientists as well as to promote more Women in Research. This year's NSD2020 programs received a financial sponsorship of Rs. 12000/- from Kerala State Council for Science, Technology and Environment, TVM and supported by Department of Science and Technology, Govt. of India. In BCM National science day celebrations 2K20 were marked by various programs.

1. QUIZ COMPETITION

A quiz competition was held on February 1st as a part of the NSD 2K20 celebrations on the topic "Women in Science". Students from three batches of Dept of Physics participated in this contest. The competition contained five rounds. All the questions were related to the contributions of women in the field of science. Quiz master Ms. Ashly Sunny tried to convey more information to the students related to the achievements of women in Science. There were four teams and the winners of the day were Akshaya Jeen Raj, Devendu M, and Gintamol P J of I DC Physics and Arya C M of IIDC Physics.





2. VIDEO PRESENTATION

Women are considered as the weakest part of the society. They were always considered as ‘they should be protected by the men’ why? The contributions and achievements made by women is comparatively very small because of this attitude of the society. So, it is very necessary to make the society aware about the strength of women. With this aim, Dept of Physics presented two videos on life and contribution of Indian women in Science and on globally well-known women scientist. It was thought provoking and encouraging to the girl students of this women’s college. Mrs Smitha Joseph, HOD, Department of Physics gave an introduction to the Women in Science.



3. SEMINAR ON SUPERCONDUCTIVITY

Department of Physics, BCM College Kottayam organised a seminar on the topic “Advances in Superconductivity” on 1st February, 2019, as a part of NSD Celebrations 2k20. The aim of the seminar was to make students aware of an interesting field of Physics which is fast growing.

The program commenced with the inaugural ceremony by evoking the blessings of the Almighty. Our chief guest, Dr. Reenu Elizabeth John, Faculty, CMS College, Kottayam, who did PhD from BCM College itself lighted the lamp and handled the technical sessions..

She started the session with two questions a) What is Superconductivity?

b) Why Superconductivity?

All the students of Physics department participated in the session. The seminar was very fruitful and helpful to the participants. The seminar concludes with an interacting session.





4. WORKSHOP ON PRACTICAL ELECTRONICS

As a part of the National Science Day Celebrations 2K19, a workshop on “Practical Electronic Circuits” was organized. The session was taken by Mr. Nibu P. Thomas, Assistant Professor, Department of Electronics, Baselius College Kottayam. The branch “Electronics” forms an integral part both in our curriculum and day to day activities.

We were blessed to have Nibu Sir who explained the theory behind every electronic circuits and also demonstrated the circuits. Before the practical session he took a class and he made students able to identify the problem behind failure of each circuit.



4. GREEN INITIATIVES BY THE DEPARTMENT

WORKSHOP ON THERMOCOL RECYCLING

Like plastic thermocol is also a threat to the world at present. So, the Department of Physics organised a workshop on thermocol recycling on 27th November 2019. 28 students from third year Physics attended the session. The session was taken by Dr. Elizabeth V John Assistant Professor, Dept. of Physics, BCM College, Kottayam. Students prepared gum using thermocol and petrol. The thermocol which was left as waste in different departments are collected by the students and it was converted to gum using petrol. The preparation was very easy. The gum produced was good to use.





5. STUDENT ENPOWERMENT PROGRAMMES

ASSOCIATION INAUGURATION

“PRAGYAAN” which means ‘The Supreme Wisdom’, was the name the rover of Chandrayaan2. We decided this as the name of our Physics association 2019-2020, as a tribute to Chandrayaan2 and the great persons who worked behind it. We proudly announced the name of our association on 26th August 2019. We were so happy that we got a great personality like Dr. Nibu A. George, Associate Professor, Baselius College Kottayam to inaugurate our association. 90 students from three batches of our department and our beloved teachers were present in this function. Association president Ms. Christy Philip welcomed the gathering and our HOD Mrs. Smitha Joseph delivered the presidential address.



FRESHERS DAY- AUGUST 26

For the first-year students everything was new when they started their life in BCM. They were excited and happy about their new program. So, we gave them a warm welcome to our family to ensure that they should feel BCM as their second home. We just opened a space for them to express themselves.



INDUSTRIAL VISIT

An Industrial visit to “Manipal University”, was organized by the Physics Department of BCM College on 18th December 2019. Twenty five third year students and two faculties visited the Physics department to interact with the Research Scholars to understand and learn from research labs. In this visit, students were very eagerly waiting for listening to highly motivated and dedicated researchers.

We reached there by 10 am in the morning. Students were divided in groups of 5 followed by the interaction with the industry person. The Head of Physics dept. conducted very informative session for the students. Also she motivated to the students to select their domain and area of interest. She also guided the students to select the areas like paper presentation etc. and its importance in research. Finally she gave a brief introduction of Manipal University

There were many projects, both completed as well as ongoing. The session was concluded with Question- Answer session. Many of the students asked different questions to the Technical Head on etc. and they cleared all the doubt and myths which was in students mind about different projects. All students were satisfied after the session. After a fruitful visit, we left Manipal University by 1.30 pm marking an end to industrial visit. The visit was hence a great success.





EXCURSION

Taking a break from their hectic schedule the students of third year Physics, along with their teachers went for a four-day trip to Coorge, Malpey and Kudachadri between 15th to 19th December. The students enjoyed the various events like trekking, boating, rafting. It was a relief from their study patterns and also a great experience. The places chosen by the students were eco-friendly and all the students including teachers tried their best to keep the plastic away from them and from the environment. Students visited the bamboo forest which gave them a calm and relaxed mind. The Tibetan culture was understood by the team due to the visit in the Golden Temple. Tibetan culture and traditions were so amazing. The cheering girls of BCM enjoyed the DJ party which turned the night to a wonderful dream. The four days were so amazing.





OPEN HOUSE AT CUSAT

On 6th December 2019, five students of second year visited CUSAT representing Department of Physics, BCM College Kottayam. They were able to experience the wide range of opportunities through CUSAT. They visited various laboratories and the faculties explained the working of various equipment used in various fields of Physics. The students were able to learn about cosmology, holograms, electronics, etc. They witnessed the formation of thin film. It was such a valuable experience.



SOLAR ECLIPSE AWARENESS CLASS AT DEVAMATHA COLLEGE KURAVILLANGADU

On 5th December, 2019, awareness class about annular solar Eclipse was conducted by Breakthrough Society and Dept of Physics of Devamatha College, Kuravilangadu. In this session two students Ms. Priyamol M and Ms. Haritha E R were participated representing Dept. of Physics, BCM College Kottayam. Coordinator of Breakthrough Science Society Prof. Thankachan (Rtd. Prof, RIT, Kottayam) gave valuable information about the myths and science behind the 'Annular Solar Eclipse'. He explained the work done by various physicist in this field.

The afternoon session was taken by Dr. Sajitha, she gave us a brief description about the universe and the phenomenon behind solar eclipse. She taught us how to make pin hole camera telescope and solar reflector. As a part of the event they provide a solar filter which could be used during solar eclipse to all the participants.



AN INTRODUCTION TO RESEARCH METHADODOLOGY

Dept. of Physics, BCM College Kottayam organised a seminar on the topic “Research Methodology” on 15th Jan, 2019 in 3rd DC batch of 29 students. Research Methodology is often a challenging subject for the students. The seminar provide a training and support to the student’s research project. The seminar was taken by Dr. Elizabeth V John, Asst. Proffessor, Dept. of Physics, BCM College. The seminar was very fruitful and energetic. After the presentation, Dr. Elizabeth V John took over to provide a brief summary what synopsis presentation and answered the questions of the participants.



A SESSION ON GENDER SENSITIZATION

“The society has to get rid of gender bias and usher gender equality which will make society harmonious, progressive and prosperous,” said Dr. Jolly James, Head of Dept. of Social work, SB College, Changanassery, while addressing the Class which was conducted in association with Dept. of FSQC. 28 Students of Physics Dept. participated in this session.

“Gender Equality” was the theme of the session and every student who participated in the session tried to express the concern about bringing up equality in society and raising voice against the crimes against women in Delhi as well as across the country.

A SESSION ON
GENDER SENSITIZATION
Organised by
The Dept. of Food Science
On 21 Jan 2020
VENUE: SR. SAVIO MEMORIAL HALL
RESOURCE PERSON
DR. JOLLY JAMES
HEAD
DEPT. OF SOCIAL WORK
S. B. COLLEGE, CHANGANASSERY
ALL ARE CORDIALLY INVITED!



TALK ON C++ PROGRAMMING

A one-day seminar was held on 27th September 2019, on the topic “UNDERSTANDING C++ PROGRAMMING” by the Department of Physics of BCM College, Kottayam. The session was handled by Prof. N. Susy Philip, former HOD of Physics department, BCM college, who was an expert in C++ programming for the past 6 years.

Although numerous computer languages are used for writing computer applications, C++ is a computer programming language which is most popular language worldwide. A super set of C; C++ is an object oriented programming language and incorporates all features offered by C.

She presented the topic with the help of presentation and simple questions. In the morning session, she explained the basic concepts in C++ programming like, array, functions, loops, keywords, literals, punctuators, operators etc. This session made the students to understand the basics of C++ programme.

In the afternoon session, she deals with internal structures of different C++ programme like programmes to find quadratic equations, acceleration due to gravity, matrix multiplication, sorting of numbers, temperature conservation etc. This session was exam oriented, so the students captured each word of her and get prepared for their exam. This session was mainly done for the final year students. The seminar was ended with the clarification of doubts. So the session was quite interactive and impressing. This programme aimed to make the students deeply connected to the digital world.



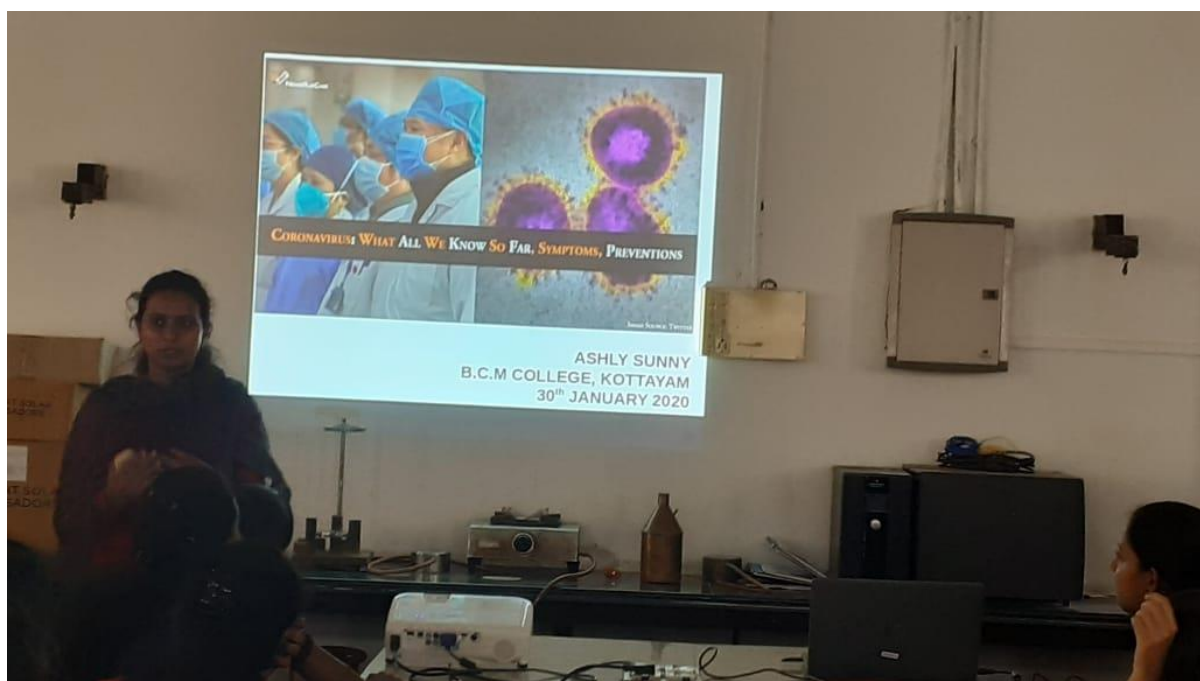
SOAP OIL PREPARATION BY THE STUDENTS

As we know self-independence and empowerment is inevitable in this era. A self-skill development program was held on 20th January 2020 by department in soap oil preparation. 28 students from the final year of department engaged in this programme. Sr. Gloria, final year BSc. Physics student lead the program. She detailed the steps for the preparation of solution. Under her guidance the students prepared about 25 litres of soap solution, which along with commercially prepared soap was later donated to Shanthibhavan Charitable Trust, Kottayam.



TALK ON CORONA VIRUS

It is our duty to ensure that the society is free from the fear of diseases. When the news related to corona virus started to spread the public became anxious. So, the department of Physics organised a class about the topic 'CORONA VIRUS' on Jan 30, 2020. The session was handled by Ms. Ashly Sunny, faculty department of Physics, BCM College, Kottayam. Around 80 students attended the session. In the class Ms Ashly Sunny discussed about the origin, properties and spreading of corona virus. Also, she explained the precautions should be taken to avoid its spreading. The class was very effective.





6. SUBJECT ENRICHMENT PROGRAMS

TALK ON CAREER PROSPECT FOR PHYSICS GRADUATES

The department of Physics of BCM college had the opportunity of taking part in a one day professional orientation held in the college premises on 26th August 2019. The talk was given by Dr Nibu A George, Assistant Professor, Department of Physics, Baselius College, Kottayam who was enthusiastic to create awareness amongst the students about different opportunities and chances in physics. Also the HOD of our Physics department Mrs. Smitha Joseph, teaching and non-teaching staffs of our department were present. HOD of our department took the opportunity to welcome the guest.

The interactive session and career guidance was led by Dr Nibu A George. He first enlisted career options in the public sectors and then went on to talk about MBA as a career opportunities. He suggested a few good institutions to consider like IIM'S, IIT, Symbiosis and Welingkav. He also compared many countries with respect to cost, course, duration, work availability, etc. for higher education. He also touched upon the emotional intelligence of a person and how it is as equally important as compared to just IQ . He mentioned that soft skills are something that is often noticed. He suggested to SWOT ourselves and then work on our weakness to better ourselves .

Overall the programme helped the students to have a better understanding the opportunities that could be offered by research and higher education.

Talk on Career Prospect for Physics Graduates



organised by

Department of Physics
BCM College, Kottayam

on

August 26, 2019

Venue: Sr. Savio Memorial Hall, BCM College, Kottayam

Resource Person: Dr. Nibu A George, Assistant Professor

Department of Physics, Baselius College, Kottayam.



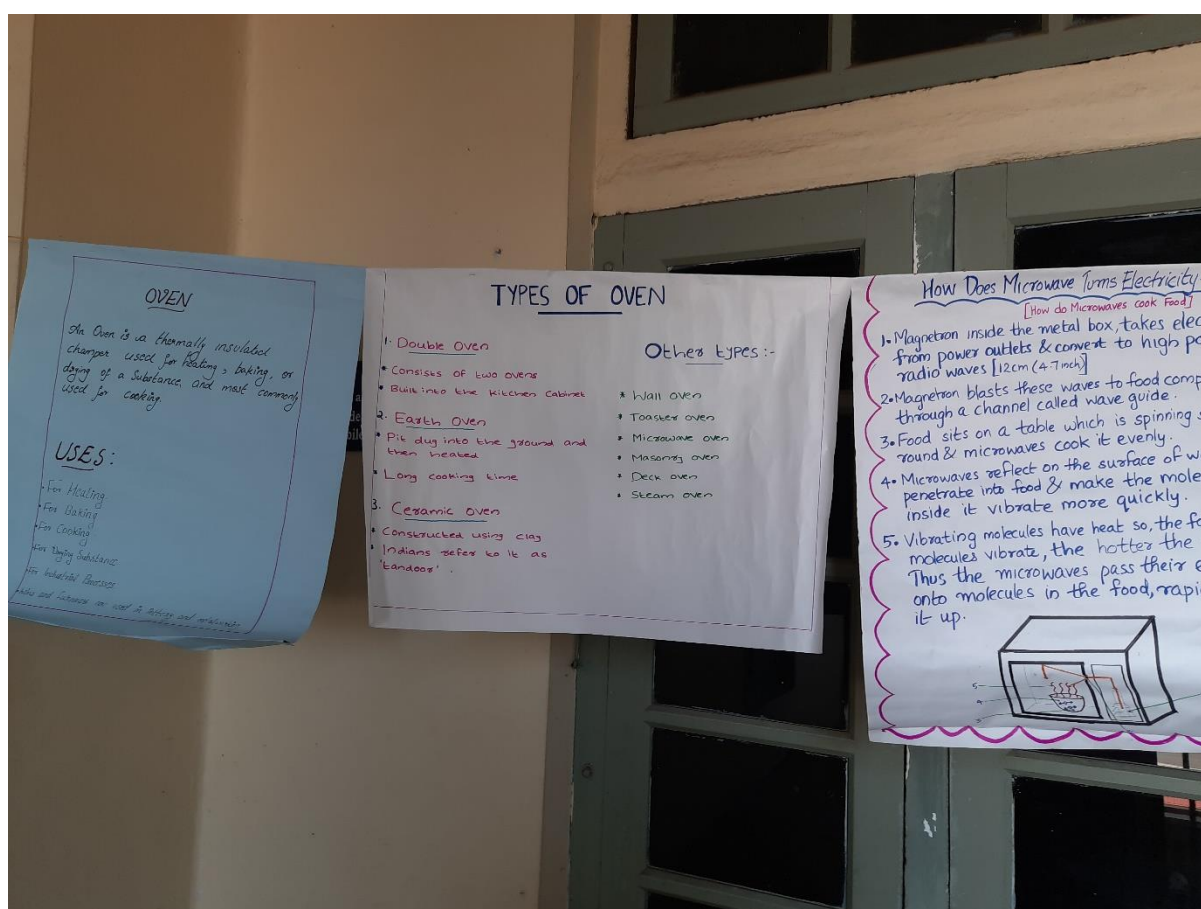
Dr. Nibu A George received Ph.D. from CUSAT and he has seven years of post-doctoral research experience in Netherlands and Canada. Later he worked as a scientist at Philips Lighting, Netherlands. He holds an international patent on energy saving LED lamps and published more than 35 international journal publications.



KNOWLEDGE CORNER (Still continuing)

From the beginning of the academic year 2019-2020, Physics Department presents chart exhibition on various household electronic equipment. These exhibitions were conducted with an aim of making others aware about the working of simple household equipments. Students were divided into six groups and they prepared the charts.

| SL No. | EQUIPMENTS | DATE OF PRESENTATION |
|--------|------------------|----------------------|
| 1 | Electric Bulb | 15-07-2019 |
| 2 | Refrigerator | 29-07-2019 |
| 3 | Mixer Grinder | 11-08-2019 |
| 4 | Oven | 25-09- 2019 |
| 5 | Fan | 14-10- 2019 |
| 6 | Iron Box | 21-11-2019 |
| 7 | Induction Cooker | 2 -12-2019 |
| 8 | Washing Machine | 7-01-2020 |
| 9 | Television | 15-01-2020 |
| 10 | Air Conditioner | 4-02-2020 |
| | | |
| | | |



METAMATERIALS

A Seminar on the topic 'INVISIBILITY' was held in Baselius College Kottayam on December 12, 2019. Dr.C. V. YELA MAGGAD explained about the metamaterials who was from the centre for nano and soft matter sciences at Bangalore. Metamaterials are artificial materials with properties that do not exist in nature, these properties are due to the structure and not material composition. Their name derives from the Greek word 'meta' which means beyond, because these materials have properties that extend beyond materials formed naturally. Dr. C.V YELAMAGGAD explained the increasing opportunity of metamaterials in research field. There is wide range of applications of metamaterials. It can be used in defence.

Certificate

To whom it may so ever concern

This is to certify that the following students of third year B.Sc. Physics, BCM College, Kottayam attended the Seminar on Metamaterials on 12th December 2019, organised by Post Graduate Department of Physics, Baselius College, Kottayam.

1. Nayana N
2. Ramzia K
3. Lakshmi Nandana M
4. Meenu Joseph
5. Sneha Philip
6. Hephzibha Chacko
7. Ardra Dhanaanjan



Dr. SINDU JONES
H.O.D., DEPT. OF PHYSICS
BASELIUS COLLEGE, KOTTAYAM



TALK ON SOLAR ECLIPSE OF THIS DECADE.

A talk on Solar Eclipse of this decade was conducted jointly by the Breakthrough Science Society & Physics Department on 13th December, 2019. The Workshop was led by the Director, Galileo Science Centre, Kottayam, Dr. P. Thankachan. He gave a detail description about Solar Eclipse which was going to happen on 26th of December, 2019 which was very visible in Kerala. The session also included topics like Celestial objects like Planets, Solar System, Seasonal changes due to orientation of Sun, Constellations and their distribution and how to observe the solar the solar eclipse etc .The class also included a brief session on making pinhole camera to observe the recent solar eclipse. Ist, IInd & IIIrd year students attended the session.



A SESSION ON TELESCOPE MAKING

The sky above us is very fascinating, Man from time immemorable wanted to know the secrets of the universe. Telescopes help us to know more about the world above us. A session on making of telescopes was organised in association with

The second half of the Workshop dealt with telescopes .The topics of discussion were types of telescopes, its parts, materials needed for making telescope using easily available materials. The Workshop enhanced student's enthusiasm in observing the coming Solar Eclipse.



WORKSHOP ON MAKING PINHOLE CAMERAS

Around 20 students from Dept of Physics, BCM College Kottayam attended an awareness class about 'Annular Solar Eclipse' organised by Breakthrough Science Society and Dept of Physics, BCM college. They were taught to make pin hole camera and solar reflector which could be used to watch the 'annular solar eclipse' safely.



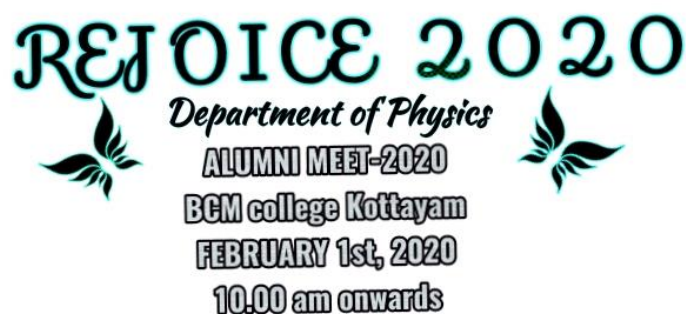
7. MANUSCRIPT MAGAZINES

To promote the talents of Physics students, the association released a manuscript. It reflected the feelings and ideas of our students. The hand-written magazine named “SPECTRUM 2019-20” was released by our dear aluminous Mrs. Shanthamma belonging to the first batch of BSc degree on February 1st 2020. The magazine included short stories, poems, drawings, scientific articles etc. It was a proof of how the department encourages the overall development of its students.



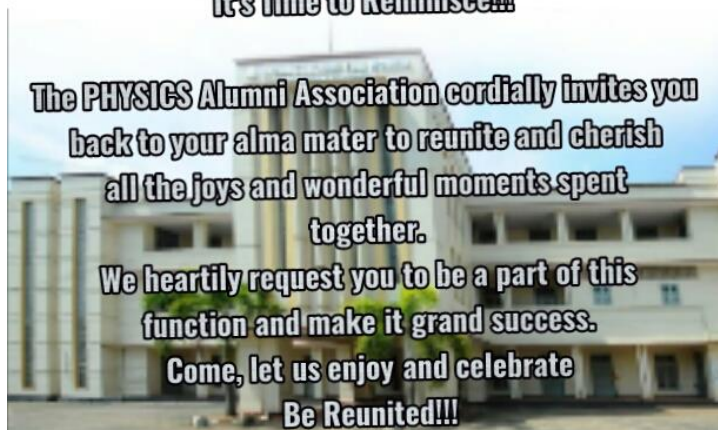
8. ALUMNI MEET

Following the previous years, this year also Alumni meet was organised on 1st February 2020. Former students participated and shared their memories. Mrs. Shanthamma, one of the students of the first batch BSc Physics inaugurated the function and shared her memories with us. It was such a beautiful experience for us. Other alumni members also shared their experience about their PG and PhD which influenced us a lot. The session ended with a group photo.



Dear Alumni,

It's Time to Reminisce!!!





ALUMINI VIST

Once they were the part of this institution, now they are our pride. We were blessed with the presence of our three former HODs – Prof. Rebecca George, Prof. Dr. Marykutty Thomas and Prof. Susy Philip on 27th September 2019. We celebrated the birthday of Dr. Marykutty Thomas in the department. It was a memorable experience.



Six alumni students of 2016-19 BSc Physics batch visited the institution on December 26th, 2019 and also viewed the annular solar eclipse.



ALUMNI CONTRIBUTION

Retd. Lab Assistant Mrs Ancy Philip contributed Rs. 2000/- towards alumni contribution for the welfare of students.



9. INTERCOLLEGIATE COMPETITIONS/ FEST CONDUCTED

ONLINE ESSAY WRITING COMPETITION

Department of Physics BCM College, Kottayam organised an online writing competition STEMINIST on the topic “innovative ideas in the field of science and technology”. From the seven entries received, two were selected for the prizes. First position was obtained by Emy Rose Jacob, Department of Electronics, BPC College, Piravom and second position was secured by Rajalakshmi R, St Thomas college, Kolencherry.



Department of Physics BCM college

STEMinist

Online writing Competition :
Innovative ideas  in the field of science and technology

Submit your writings to
pragyaan2019physics@gmail.com
on 1st February 2020
before 3.50pm

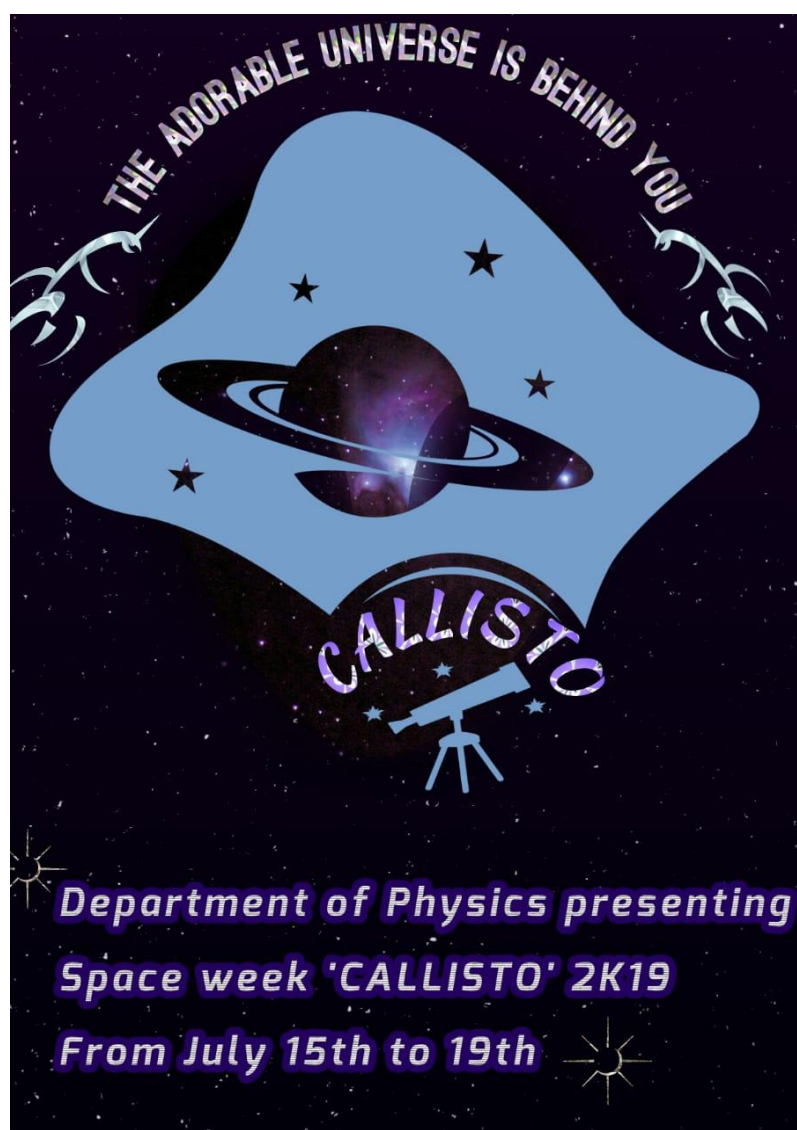
First Prize 2K
Second Prize 1K

Presentation of the prize winning Ideas  will be held later

10. INTERDEPARTMENTAL COMPETITIONS

CALLISTO-A SPACE JOURNEY

“Moon was easier but Mars is not”, but still we explored it. India and Indians have great passion in space research. So, space is not just something that is a secret for us. It presents vast opportunities before us. ISRO is trying to find more about this unending mystery. Thus, we decided to celebrate a space week as a tribute the 50th anniversary of the landing of man on moon. In order to inculcate curiosity and scientific temper in students, we organized a one week program “CALLISTO 2K19” from July 15th to 19th. This event is all about different interdepartmental competitions like quiz, debate, puzzle, cartooning and darkroom.





THE ADORABLE UNIVERSE IS BEHIND YOU

CALLISTO

Department of Physics presenting
Space week 'CALLISTO' 2K19
From July 15th to 19th

Day 1 :
Puzzle

Day 2 :
Debate
**Presentation

Day 3 :
Cartoon
Quiz

Day 4 :
**The CALLISTO event
DARK ROOM

Day 5 :
Spot quiz concerned to
the chart display
**Prize distribution

The poster features a central graphic of a planet with rings and stars, a telescope, and a person in a space suit. The text is arranged in a vertical list format, with decorative elements like a large 'E' and a rocket.



CALISTO- TO EXPLORE THE UNIVERSE

The universe we see is a small part of the whole. We need to develop keen interest in the ignited mind of youngsters to explore the universe. “Dream, Dream, Dream” until you achieve that dream. Once the mysteries of universe was also such a dream for mankind but now we reached MARS through MOM (Mars Orbiter Mission- Mangalyaan). The journey which started in a bicycle to ‘Thumba’ has now reached in the MARS using PSLV- The Small Boy.

Pragyaan was also the part of a space mission, so we the Department of Physics decided to celebrate Space Week 2K19 as tribute to the 50th anniversary of man on moon. Neil Amstrong, Buzz Aaldrin and Mike Collins made moon too close to us. Until then moon was an impossible place for us human beings. But this event pushed the horizon of mankind beyond the earth..... Thus knowing the importance of the event we decided that we should do something special to admire this and we came up with idea of a mini solar system in our dark room.....

The mind of the ancient people was filled with a lot of superstitious believes. Even the planets were considered as God those days...But some people like Galelio and Coppernicus devoted their whole life to solve the mystery of the universe and it’s their devotion and hard work that unrevealed the truth that the shape of the earth is round not flat and its Sun and not Earth that centre our solar system. After these events the outlook of human beings had completely changed and people started to find out more about the universe and the process is still ongoing.



DEBATE COMPETITION

In the present world the young minds have a tendency to find the truth and lies of matter. A person who can find the good and bad effect of something will have a good strength to lead the world in the future .There is a debater in every mind. All that they need is a chance. ‘CONFERRAL’ was that chance given by CALISTO 2K19 to the BCM to find “IS TECHNOLOGY A BOON OR A BAIN?”, because debate will lead to some findings which in turn produce some good thoughts and practices. Prof. Dr. Ajis Ben Mathews of History department and Prof. Vinu of Computer science department were the judges. Gayathri V Nair of 3rd DC Economics was selected as the best debater.



SPACE QUIZ

CALISTO 2K19 was organized to enrich the knowledge about space. RAPIDOZ was the quiz competition conducted with this aim. The students from science and arts departments participated in this competition. Harshamol R and Abhinaya Murugeshan of 3rd dc physics were the quiz masters. The aim of the program was to widen the horizon of knowledge and thinking capability of students. There were 15 teams of contestants, among them Harsha Anna Philip and Lisa Liyas K Nadia from department of English were the winners.



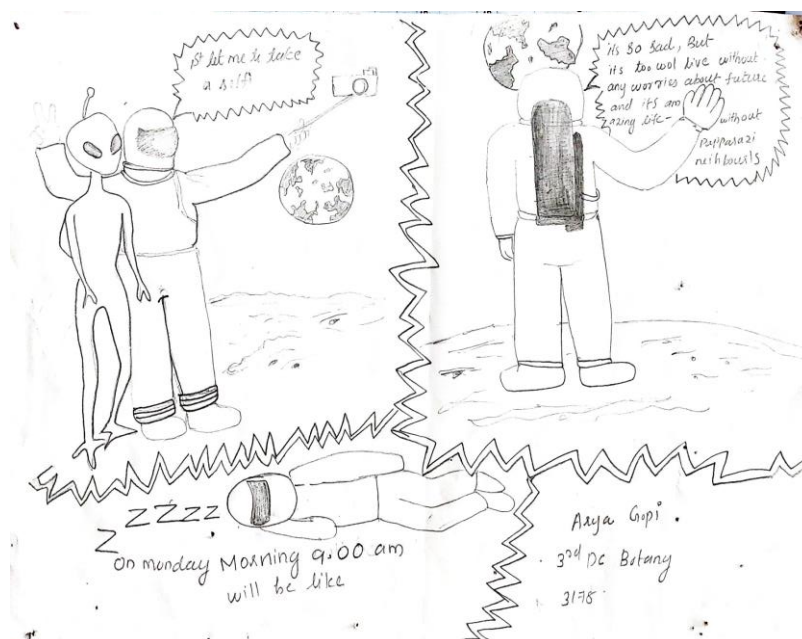
PUZZLE COMPETITION

'ZHASINOS' was the puzzle competition conducted as a part of the CALISTO 2K19 . Our aim was to improve the thinking capability of the students. The competition evaluated the speed of participants in ordering and arranging the shuffled pattern. It was the event of the space week with most number of participants. Shilpa Thomas and Malavika Prem of 3rd Dc English were the winners of the competition.



CARTOON COMPETITION

Not everyone is blessed with the ability to visualize their thoughts. It is a great blessing of the almighty God. We have to give a platform to the students who love drawing. 'KALOPSIA' was the cartoon competition held as the part of CALISTO. We were so amazed by the entries which were beyond our expectations. The judgment was not so easy for the judges. Arya Gopi from 3rd DC Botany was the winner of this event.



VALEDICTORY FUNCTION

As the concluding session of the Calisto-Space week celebrations the valedictory function was arranged on 19th July 2019. Ms. Christy Philip, Association President welcomed the gathering. The function was inaugurated by Dr. Annu Thomas, Vice- Principal and HOD, Department of Chemistry. Prizes were distributed by the senior teachers of different science departments. Ms. Donamol Abraham Association Secretary gave a word of thanks to all.



POWER QUIZ -OCT 3

On October 3rd 2019 Department of Physics in association with KSEB organized a 'power quiz'. The event was conducted for students from different Departments of BCM College Kottayam. The quiz competition was a great success. First place was secured by Ms. Vrinda S. Raj, II DC Physics and second prize was secured by Ms. Devika Anilkumar, III DC Botany.





KSEB OFFICERS ASSOCIATION

Officers House, TC 25/2969, Malloor Rd.
Thiruvananthapuram - 695035
Ph: +91 471 2462300
Email: info@kseboa.org, www.kseboa.org.

From,
The Convener

To,
The Principal

..... B.C.M. College
..... Kottayam

കെ.എസ്.ഇ.ബി ഓഫീസേഴ്സ് അസോസിയേഷന്റെ നേതൃത്വത്തിൽ 2019 ഒക്ടോബർ 3 ന് താങ്കളുടെ സ്ഥാപനത്തിൽ നടന്ന പവർക്വിസ് 2019 ന്റെ പ്രാഥമികതല മത്സരത്തിൽ താഴെ പറയുന്ന വിദ്യാർത്ഥികൾ വിജയികളായതായി സസന്തോഷം അറിയിച്ചുകൊള്ളുന്നു.

2019 ഒക്ടോബർ 23 ന്
വച്ച് നടക്കുന്ന ജില്ലാതല മത്സരത്തിൽ ഇവരെ പങ്കെടുപ്പിക്കണമെന്നും ആയതിനുള്ള സഹായസഹകരണങ്ങൾ നൽകണമെന്നും അഭ്യർത്ഥിച്ചുകൊള്ളുന്നു.

വിജയികൾ

1-ാം സ്ഥാനം *Vrinda S. Raj, II DC Physics*

2-ാം സ്ഥാനം *Devika Anil Kumar*
3rd DC, Botany

[Signature]
Convener
Power Quiz Sub Committee



STUDENT PARTICIPATION IN INTERDEPARTMENTAL COMPETITIONS

The following students of Physics association participated in various inter- departmental competitions during 2019-2020

| Competition | Participants | Position |
|---|---|-----------------|
| Debate, Dept of Commerce | Donamol Abraham | First |
| RJ Competition, Dept of Commerce | Donamol Abraham | First |
| Doodle Competition, Dept of Mathematics | Raiza Rebecca Jacob | First |
| Ramani Tharayil Quiz, Dept of Chemistry | Raiza Rebecca Jacob & Tyby Monachan | Second |
| Maths Quiz, Department of Mathematics | Raiza Rebecca Jacob & Christy philip | First |
| Best Manager, Dept of Computer Science | Raiza Rebecca Jacob | Second |
| Product Management, Dept of commerce | Raiza Rebecca Jacob, Tyby Monachan & Ani Archa Raju | Second |
| Marketing, Dept of Commerce | Raiza Rebecca Jacob | First |
| Poster Making, Dept of Commerce | Meenu Joseph | First |
| Debate, Dept of Mathematics | Donamol Abraham | Second |
| IQ Test, Dept of Commerce | Lakshmi Nandana M V | Second |



Bishop Chulaparambil Memorial College
Kottayam, Kerala 686001

CERTIFICATE OF MERIT

This is to certify that Sri/Kumari Ratza Rebecca Jacob
Of Physics Department has won ~~first~~/~~second~~/~~third~~/~~fourth~~ prize in SPARK
Best Manager Contest organized by Department of Computer Science.

Kottayam
5-07-2019



Divya S
05/07/19
Head of the Department
Dept. of Computer Science
B. C. M. College, Kottayam

11.SPORTS ACTIVITIES

COLLEGE TEAM

Tyby Monachan , Meenu Joseph & Surya Raveendran of the Dept. of Physics were the part of college cricket team and they participated in the inter-college cricket tournament .



Raiza Rebecca Jacob , Meenakshi Rajesh of Dept. Of Physics was the part of college basket ball team and they participated in the inter-college university basket ball tournament and senior league tournament.

Litty Maria p Sebastian of dept. Of physics is selected in the college basket ball team



PARTICIPATION IN COLLEGE SPORTS DAY CELEBRATION

| Name | Event | Position |
|--|----------------------------|---------------|
| Safalya Surendran Betty Thomas Tony Thomas Amrutha Siby Parvathy S | Marchpast | First |
| Vineetha Devadas Parvathy Salimkumar | Marchpast | Fourth |
| Meenakshi Rajesh | Shortput | Third |
| Surya Ravendran Meenakshi Rajesh | Tug of war | Participation |
| Surya Ravendran | Penality kick Badminton | Participation |

12.ARTS FEST PARTICIPATION

The following students of Physics association participated in various competitions during 2019-2020.

| Competition | Participants | Position |
|--------------------|--|-----------------|
| Recitation English | Rosemol Boby | Second |
| Group Dance | Devika S (Abhogi) | Second |
| Oppana | Safalya(Abhogi) | Second |
| Oppana | Fathima Sultana(Keli) | First |
| Thiruvathira | Keerthana V (Keli) | Second |
| Monoact | Litty Maria P Sebastian (Keli) | Second |
| Spot Painting | Litty Maria P Sebastian (Keli) | First |
| Light Music | Akshaya Jeenraj(keli) | Second |
| Western Vocal Solo | Rosemol Boby(abhogi) Raiza Rebecca Jacob(Dhwani) | Participated |
| Western Group Song | Harshamol R Meenu Joseph Raiza Rebecca Jacob (Dhwani) | Second |

| | | |
|--------------------|----------------------------------|--------------|
| Group Song | Keerthana V(keli) | Second |
| Recitation Hindi | LittyMaria P Sebastian (Keli) | Participated |
| Recitation English | Raiza Rebecca Jacob | Participated |
| Thiruvathira | Haritha E R | Third |

13.PARTICIPATION IN NCC AND NSS

NCC PARTICIPANTS

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the following students of department of Physics actively participated in various activities by NCC during the academic year 2019-20.


| | |
|------------------------|------------------------|
| 1. Nayana N | - 3 rd year |
| 2. Parvathy salimkumar | - 3 rd year |
| 3. Vineetha Devadas | - 3 rd year |
| 4. Betty James | - 2 nd year |
| 5. Safalya Surendran | - 2 nd year |
| 6. Tony Thomas | - 2 nd year |
| 7. Amrutha Siby | - 2 nd year |
| 8. Parvathy S | - 2 nd year |
| 9. Sreelakshmi V H | - 1 st year |
| 10. Jithu K Mathew | - 1 st year |
| 11. Surya Raveendran | - 1 st year |
| 12. Meenakshi Rajeesh | - 1 st year |
| 13. Devika K Sunil | - 1 st year |
| 14. Megha Anil | - 1 st year |
| 15. Akshaya Jeenraj | - 1 st year |




 Lt. Dr. REEJA P.S.
 NCC/07310078
 Associate NCC Officer
 5 Kerala Unit NCC (S/N) Army Wing
 BCM College, Kottayam - 686 001

NCC Achievements

1. **Parvathy Salimkumar**, 3rd DC participated in Inter-Group Competition of Thal Sanik Camp at NCC Complex, Kozhikode representing Kottayam Group and bagged individual Bronze Medal in Inter-Battalion Competition. She also passed B Certificate examination.
2. **Safalya Surendren**, 2nd DC participated in Pre-IGC I of the prestigious Republic Day parade Selection Competition. She was selected for the four camps among the 12 on the way to Rajpath.
3. **Nayana N**, 3rd DC passed B certificate examination.
4. **Vineetha Devadas**, 3rd DC was a member of the guard of honour team of BCM NCC Unit and given guard to minister M. M Mani at Marian College, Kuttikanam.


H.D. Raju > Recommended

NSS PARTICIPANTS

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the following students of department of Physics are NSS volunteers and actively participated in various activities by NSS during the academic year 2019-20.

- | | |
|----------------------|-----------------------|
| 1. Aleena Anna Alex | -2 nd year |
| 2. Akhila M | -2 nd year |
| 3. Aparna Santhosh | -2 nd year |
| 4. M S Arunima | -2 nd year |
| 5. Neeraja Ramesh | -2 nd year |
| 6. Susan T Chacko | -1 st year |
| 7. Nandana Vijay | -1 st year |
| 8. Carmel Rose Benny | -1 st year |
| 9. Brilla Johnson | -1 st year |
| 10. Mariya Susan Lal | -1 st year |
| 11. Anna Treesa Saji | -1 st year |



Byju
6/2/2020
In. Byju Mathew
Programme Officer
PROGRAMME OFFICER
National Service Scheme
UNIT NO. 8
B. C. M. College, Kottayam

14. SCHOLARSHIPS AND FREESHIPS FROM DEPARTMENT OF PHYSICS

1. BEST OUTGOING STUDENT 2018-19

Ms Chilby Anna Abraham received the best outgoing students for the year 2018-19, instituted by the retired teachers of department of Physics.



2. ELIZABETH GEORGE KAKKASSERIL MEMORIAL ENDOWMENT

Elizabeth George Kakkasseril Memorial Endowment for the six outgoing students eligible for higher studies was received as follows

| Sl.No | Name of the Student | Graduate Program and percentage | Higher education course & institution | Amount (Rs) |
|-------|------------------------|---------------------------------|--|-------------|
| 1. | Sandra M. P. | BSc. Botany, 98% | M.Sc Botany, CUSAT | Rs. 10000/- |
| 2. | Nithya George | B.Sc. Physics, 86% | MA Sociology, Layola College of Social Sciences, TVM | Rs. 10000/- |
| 3. | Anit Mariya Joseph | B.Sc. Chemistry | M.Sc. Chemistry, SB College Changanacherry | Rs. 10000/- |
| 4. | Aiswarya Radhakrishnan | BA Sociology, 94.18% | MA Sociology, CMS College, Kottayam | Rs. 10000/- |
| 5. | Ashna Mohan | B.Sc. Zoology, 87% | M.Sc. Zoology, Alphonsa College Palai | Rs. 10000/- |
| 6. | Subitha Sudhakaran | B.A. English, 97% | MA English, St. Thomas College, Palai | Rs. 10000/- |



Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211526 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
27/9/19
Abul Kalam Iqbal

Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211529 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
11/10/19
Sudha Sankaran

Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211525 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
27/9/19
NITHYA Gudeckal

Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211528 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
27/9/19
Ashina Hekka

Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211527 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
27/9/19
Aparna Banu (Kathirampal)

Received with thanks from Rebecca George/ G Korah Anchery

Cheque no: 211524 dt 27/09/2019 drawn on SBI, Kalathipady,

Vadavathoor . P.O, Kottayam for Rs. 10000/- for educational assistance.

[Signature]
27/9/19
Sondham P

3. FREESHIPS FROM THE Department

| Sl.No | Name of the student | Purpose | Amount (Rs.) |
|-------|------------------------------------|---------------------|--------------|
| 1. | Donamol Abraham, III DC Physics | IV | 2600/- |
| 2. | Meenu Joseph, III DC Physics | Hernia treatment | 4000/- |

15. EXTENSION ACTIVITIES

15.1 ACADEMIC EXTENSION ACTIVITIES

FILTER MAKING

Students of Ist and IInd year BSc Physics actively participated in filter making during Dec 21, 22, 23, 2019 for the annular solar eclipse of Dec 26th 2019, in Association with Breakthrough Science Society at Galileo Science Center, Kottayam.





AWARENESS CLASS ABOUT ANNULAR SOLAR ECLIPSE FOR SCHOOL CHILDREN

From 2nd December to 6th December 20 IInd year students went to different schools including Govt.HSS Karapuzha,Model School,Govt. UP School Muttampalam, St. Thomas School Kurissupaly... and they made students aware about what is annular solar eclipse and the science behind the phenomenon. They also taught the students how to make the equipments which are useful in watching the solar eclipse safely.



VIEWING SOLAR ECLIPSE

The Solar eclipse was also visible from BCM College using the filters which our students made. Many people took this opportunity to see the rare phenomenon of the decade.



15.2 NON-ACADEMIC

OLDAGE HOME VISIT: “SHANTI BHAVAN”

On 21st January, 2020, 3rd year students of department of physics of BCM college, Kottayam, paid a visit to an old-age home named Shanti Bhavan at Kottayam to meet and spend their time with the elderly. It was the opportunity of students to share their joy and love with them. The inmates were very hospitable and friendly and they welcomed students with their beautiful smiles. To break the monotony of other lives, students presented a few songs, distributed sweets and engaged in chatting with the inmates. They share their grief with students which implies they were in hunger of love and to love. We can see that there were two types of people one who was abandoned and the others were suffering from some sort of disability. They sang song with students and broke out into laugh to show their happiness. The students gave cleaning and hygiene products made and collected by themselves to show their love towards the elderly ones. The day turned out to fruitful and happy. The head of the shelter home was overwhelmed by our presence.







**16. ACHIEVEMENTS OF STUDENTS IN COMPETITIONS
CONDUCTED BY OTHER COLLEGES**

BASELIUS COLLEGE, KOTTAYAM
AFFILIATED TO MAHATMA GANDHI UNIVERSITY, KOTTAYAM.

Organised by,
PHYSICS ASSOCIATION

This is to certify that Mr/Ms..... RAIZA REBECCA JACOB has participated/~~Won~~ the..... prize in 12th Prof. SUSAN JOHN MEMORIAL ALL KERALA INTERCOLLEGIATE QUIZ conducted by Physics Department, Baselius College, Kottayam on 2nd September 2019



Dr. Biju Thomas
(Principal)



Dr. Sindu Jones
(Head of the department)



Dr. Anisha Mary Mathew
(Convener)

Date: 02/09/2019
Place:Kottayam

GOVT. OF INDIA
Nehru Yuva Kendra Sangathan, Kottayam District, Kerala
NEIGHBOURHOOD YOUTH PARLIAMENT



PARTICIPATION CERTIFICATE

Sri/Kum... RAIZA REBECCA JACOB.....
has successfully participated in the
Neighbourhood Youth parliament held at
.... BCM COLLEGE KOTTAYAM..... on 8th JULY 2019.

Place

Date

Jain George
Jain George
District Youth Co-ordinator

GOVT. OF INDIA
Nehru Yuva Kendra Sangathan, Kottayam District, Kerala
NEIGHBOURHOOD YOUTH PARLIAMENT



PARTICIPATION CERTIFICATE

Sri/Kum... TYBY. MONACHAN.....
has successfully participated in the
Neighbourhood Youth parliament held at
.... BCM COLLEGE KOTTAYAM..... on 8th JULY 2019.

Place

Date

Jain George
Jain George
District Youth Co-ordinator



GOVT. OF INDIA
Nehru Yuva Kendra Sangathan, Kottayam District, Kerala
NEIGHBOURHOOD YOUTH PARLIAMENT

Logos: Swachh Bharat Mission, Digital India, DDU-GKY, NRLM, Make in India, SAGY, Kerala State Self-Entrepreneur Development Mission, NYS, KIS.

PARTICIPATION CERTIFICATE

Sri/Kum...DANAMOL...ABRAHAM.....
has successfully participated in the
Neighbourhood Youth parliament held at
...BCM...COLLEGE...KOTTAYAM..... on .8th...JULY.2019..

Place
Date

Jain George
District Youth Co-ordinator

17. UNIQUE/ INNOVATIVE PROGRAM

SoULS (Solar Urja through Localisation for Sustainability) of Indian Institute of Technology (IIT) Bombay.

Physics dept. in association with IIT Bombay Organised a Solar Lamp Assembly 1 day Workshop. First, second and third year students from various department took active participation in it. The training sessions included: Introduction to Energy and Electricity, Why Solar Energy is better than Electricity? Benefits and usage of Solar Energy, Introduction to Toolkit Components, Familiarisation of Components and Physical Testing, and Technical Testing of the Technical components. Teachers and 5 physics students were selected as Student Solar Ambassadors and were trained by experts on how to use the equipment. They also received a certificate of participation from IIT Bombay for attending the workshop.







Interesting and enjoyable experience. First time in my life I have done something productive on October 2nd - Gandhi Jayanti.

Ranjita K.
3rd DE Physics

Solar Lamp Assembly

It was a great experience to assemble a solar lamp myself. It also made me think myself how much pollution is being released each day. The gladder I am is that I made one for myself and my friends. I also will try to keep the promise that I made on this day.

Christy Philip
3rd DE Physics

HARSHA MOL R
3rd DE PHYSICS

Feedback on Student Solar Ambassador

The programme was innovative. It was also a good engagement for making the occasion of Gandhi Jayanti meaningful. Also it gave information about the different forms in which the solar energy and other renewable resources can be utilised well for electricity production. It was worth for me!

— x — x —

18. UNION MEMBERS FROM THE DEPARTMENT

TONY THOMAS of second year Physics is the UUC of college union “VAMIKA”



19. PROGRAMS CONDUCTED FOR SLOW AND ADVANCED LEARNERS

SLOW LEARNERS: PEER TEACHING

| Student | Topic covered | Month | Spouse | Student | Topic covered | Month |
|---|---|----------|-------------------|--|--|--------------------------------|
| 1) Sr. Gloria 2) Shami S. 3) Virendra Devedas 4) Abhild P. 5) Mrunu Joseph 6) Hephaisba Chacko 7) Pritina Fatima VN 8) Hritika ml.R. | Particle in a box, Schrodinger equations. Flip-flops, Number Logic Gates, C++ programs Maxwell's equations, Electromagnetic Induction, Thomson's theorem | August | Spouse | 1) Animesha.S. 2) Dhanamal Abiruban 3) Anil Archa Raju 4) Arzita Pheenanjaya 5) Ramza.K. 6) Shilpa Susan Thomas 7) Niyana.N. 8) Lakshmi Nardasa br.v. | Classical Mechanics - Lagrange and Hamiltonian equations. Pellukun, Remote sensing, Solar energy C++ program, Algorithms and Flowchart of programs | August September October |
| | Maxwell-Boltzmann Statistics, Fermi-Dirac Statistics, Bonding in Solids | December | Spouse | | Nuclear Physics, Radioactivity | December |
| | | January | Spouse | | Molecular spectroscopy - | January |

III DC : 2019 - 2020

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| Student | Topics Covered | Months | Spoke | Student | Topics Covered | Months |
|---|--|---|--|---|--|---|
| 1) Megha Suresh 2) Soha Philip 3) Iyby Manojan 4) Samini S. Kumar 5) Abhinaya Manjagan 6) G. Darshikaani 7) Raza Rehman Jacob | LCR circuits - series and parallel Waste Management and Renewable energy JK flipflops, SR flipflops Thermodynamic Relations Diffusion, Defects | August September October December January | Philip Philip Philip Philip Philip | 1) Anvi Premprakash 2) Christy Philip 3) Surya G. Naik 4) Penelope Subramanyam 5) Amreena P. 6) Aditya K. B. | Human Rights Multiplexers, Demultiplexers, encoder, decoder Classical Mechanics - Newton's formulation Classification of Materials Relativity - Special Theory and General Theory. | August September October December January |

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II DC Physics- Peer Teaching

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| GROUP | STUDENTS | DATE & TOPIC |
|-------|---|--|
| 1. | <u>Aleena Anna Alex</u> | 01/01/2020 - Rectifier, Transistor biasing |
| | Amrutba Siby | 06/01/2020 - Filter circuit, Thermal runaway |
| | Anjali Kuttan | 07/01/2020 - Voltage regulator |
| | Aparna Santhosh | 09/01/2020 - Feedback, Q-point, DC loadline |
| | Arya C M | 13/01/2020 - Voltage multipliers, Amplifier |
| | | 14/01/2020 - Clipper, Clamper, Oscillator |
| 2. | <u>Betty James</u> | 01/01/2020 - Rectifier, Transistor biasing |
| | M S Arunima | 6/1/2020 - Filter Circuit, Thermal runaway |
| | Neeraja Ramesh | 7/1/2020 - Voltage regulator |
| | Parvathy S | 9/1/2020 - Feedback, Q-point, DC loadline |
| | Safalya Surendran | 13/1/2020 - Voltage multipliers, Amplifiers |
| | | 14/1/2020 - Clippers, Clamper, Oscillator |
| 3. | <u>SABHITA CHANDRAN</u> | |
| | Surya Muraleedharan | 01/01/2020 - Rectifier, Transistor biasing |
| | Vrindha S Raj | 6/1/2020 - filter circuit, Thermal runaway |
| | Akhila M | 7/1/2020 - Voltage regulator |
| | Aleena Sosa Christopher | 9/1/2020 - feedback, Q-point, DC loadline |
| 4. | <u>Aranya M Rajan</u> | 01/01/2020 - Rectifier, Transistor biasing |
| | Atthira Krishna | 6/01/2020 - Filter circuit, Thermal runaway |
| | Bilna Binu | 7/01/2020 - Voltage regulator |
| | Devika S | 9/1/2020 - Feedback, Q-point, DC loadline |
| | Haritha E R | 13/1/2020 - Voltage multipliers, Amplifiers |
| | | 14/1/2020 - Clippers, clamper, Oscillator |
| 5. | <u>Jophy Jose</u> | |
| | Meenakshi Omanakuttan | 01/01/2020 - Rectifier, Transistor biasing |
| | Priyamol M | 06/01/2020 - Filter circuit, Thermal runaway |
| | Rosemol Boby | 7/01/2020 - Voltage regulator |
| | Tony Thomas | 9/1/2020 - feedback, Q point, DC load line |
| | | 13/1/2020 - voltage multipliers, Amplifier |
| | 14/1/2020 - clippers, clamper, oscillator | |

1st DC Physics-Peer Teaching

| Student | Topics Covered | Month | Signature | Student | Topics Covered | Month | Signature |
|--|--|----------|-----------|--|---|-------------------------|-----------|
| 72 1. Akshaya Tejraj 2. Anmol Rose Perry 3. Devendu M 4. Devika K Sunil 5. Meenija Susan 6. Meenakshi Rijesh 7. Nandana Vijay | Summation of series, Chemical Bonding Binary numbers, Scientists, Matrix multiplication. | August | | 1. Sruya Ravindran 2. Susan P chacko 3. Akhila G Nair 4. Anagha K Reji 5. Anna Treasa Saji 6. Baniika Johnson | Vector Analysis, toros, Summation of series. Coul, divergence, Platonsz multiplication | August September | |
| | Volimetric Analysis Eigen values. | October | | | Chemical bonding, photo electronic effect | October | |
| | Iteration Method, False Method. | December | | | Cantilever, torsion pendulum bending moment | December | |
| | Newton drawison Method, Photoelectronic effect. | January | | | Iteration Method, False Method, Binary numbers. | January | |

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| Student | Topics Covered | Month | Signature | Student | Topics Covered | Month | Signature |
|--|---|---------------------|-----------|---|---|---------------------|-----------|
| 1. Fatima Sulthana 2. Farwa A. H 3. Jintanvi PJ 4. Jithu K Mathoo 5. Kavya K S 6. Keerthana V | Summation Series, Binary Numbers. Periodic table, Volumetric Analysis. | August September | | 1. Litty Monica P 2. Neeraja K Saji 3. Rona Roy 4. Sreelakshmi VH 5. Megha Anil 6. Nandana Vijay | Eigen values, vector Analysis Chemical bonding, Volumetric Analysis. | August September | |
| | Newton's Multiplication, Functions. | October | | | Molarity, photoelectric effect, orbital, orbits. | October | |
| | Isomerism, Chirality polymers, | December | | | Wave motion, elasticity, Integration, | December | |
| | Oscillations, wave motion | January | | | Exact Integration, partial derivative. | January | |

ADVANCED LEARNERS: WWS & CAMP



Participation Certificate



New Initiatives in Higher Education

Directorate of Collegiate Education
Government of Kerala
State Motivation Camp [SMC]
Walk With a Scholar

This is to certify that *Ms.* *Raiza Rebecca Jacob* of *Bishop Chuloperambil*
Memorial College (B.C.M) has attended the State Motivation Camp 2019 for the mentees of Walk With a Scholar Programme,

organized by the Directorate of Collegiate Education, Govt. of Kerala from 29-1-2019 to 31-1-2019 at Rajagiri College of Social Sciences,
Kalamassery, Ernakulam.

Ernakulam

Date: 31-01-2019


Dr. K. Murugan
State Co-ordinator
(New Initiatives in Higher Education)





Director
Directorate of Collegiate Education
Government of Kerala

With Thanks.....

Department of Physics

