

### **AUXILIUM COLLEGE (Autonomous)**

(Accredited by NAAC with A+ Grade with a CGPA of 3.55 out of 4 in the 3<sup>rd</sup> cycle) Gandhi Nagar, Vellore – 6.

## ASSOCIATION ACTIVITY REPORT DEPARTMENT OF PG PHYSICS

NAAC CYCLE IV SSR 2023

1

## <u>Auxilium College (Autonomous), Vellore</u> <u>PG & Research Department of Physics</u> <u>Association Activities Academic Year</u> <u>2018-2019</u>

#### <u>Activity I</u>

Inauguration of Physics association was held on 24<sup>th</sup> July 2018. Dr. R. Ravi Sankar, Associate Professor, Govt Arts college, Thiruvannamalai, delivered a lecture on 'Radiation Physics' and explained the measuring techniques of radioactivity.

Number of Beneficiaries: 177

| (Accredited by NAAC with A+ Grade wi   | ge (Autonomous)<br>th a CGPA of 3.55 out of 4 in the 3 <sup>rd</sup> cycle)<br>Vellore - 632006<br>hysics Association |
|--|---|
| Department   |   |
| 24 <sup>th</sup> July  | / 2018,   |
| <b>Resource</b><br>Dr. R. Ravi<br>Assistant P<br>Department<br>Govt. Arts & So<br>Tiruvanna                      | shankar<br>Professor<br>of Physics<br>ience College   |
| Convenor<br>Dr. P. Nisha Santhakumari<br>Associate Professor & Head<br>Department of Physics<br>Auxilium College | Co-Convenor<br>Sr. X. Venci<br>Assistant Professor<br>Department of Physics<br>Auxilium College                       |
| Venue: Seminar Hall –  | Computer block  |

One day National conference on "Advanced materials and Applications" was held on 7<sup>th</sup> September 2018 in Collaboration with Indian Spectrophysics association – ISPA.Dr.S.Gunasekaran, Dean of research and development, St. Peter's university, Chennai and founder of ISPA delivered the inaugural address and presented the uniqueness of ATR Spectroscopy In the afternoon session, Dr. Hubert Joe I. Associate Professor of Physics, Mar Ivanios College, Thiruvanathapuram, delivered his talk on 'Non linear Optical Properties and Terahertz Generation studies of Organic Crystals'. The seminar was concluded with valedictory function presided by Dr. Kalainathan S., Sr. Professor and Director, VIT University, Vellore who spoke on advanced materials and its various applications in different fields and encouraged the students towards research. He then distributed the certificates for the participants and for who presented the papers in NCAMA- 2018. Ninetyfive external participants participated in the conference and 25 of them presented their research work on advanced materials.

Number of Beneficiaries : 95



We, the Management, Principal and the faculty of Physics Department cordially invite the faculty members, Research Scholars, Students of physics and chemistry of your institution to participate in the conference.

Vellore The Historic place Vellore in Tamil Nadu is known for its Ancient fort, Golden temple, Christian Medical College (CMC) and Vellore Institute of Technology (VIT).

and vellofe institute of recinnology (VII). About the College and the Department Auxilium College, founded in 1954, is the first women's college in the North Arcot district and now it's affiliated to the Thiruvalluvar University. Auxilium has been granted the status of autonomy by the UGC and the Thiruvalluvar University from the Academic year 2007-2008. It is a minority institution, established and administered by the daughters of Mary help of Christians commonly known as Salesian sisters of Don Bosco, belonging to the Catholic Church.

THE MOTTO OF THE COLLEGE :

#### "KNOWLEDGE AND VIRTUE"

The main goal of the college is to produce in a Salesian atmosphere, integrally formed young women who will be agents of social transformation in today's India.

The physics department has been functioning since the beginning of the college and major Physics (UG) was started in 1999 and Post Graduate (PG) in 2014.

About the conference: Advanced materials are the basis of modern science and technology. Hence its area of research provides a broad scope for various potential applications.

The conference will provide a viable forum between the scientists, faculty members, research scholars and students to interact, gain knowledge and to present original research contributions in this field. We hope that the knowledge shared will be immensely helpful for pro-active research and publication pursuits for aspiring scholars and scientists.

#### Topics to be Covered:

- Crystal growth Nano materials
- 🍋 Thin films
- Me Sensors
- Polymers
- **& Smart Materials**
- \* Energy materials

#### **RESOURCE PERSONS**

Dr. S. Gunasekaran Founder of Indian Spectrophysics Association Dean, Research and Development St. Peter's Institute of higher education and Research, Avadi, Chennai.

Dr. I. Hubert Joe Associate Professor Mar Ivanios College Thiruvananthapuram Kerala

Dr. S. Uthanna Professor Department of Physics Sri Venkateshwara University Tirupati

| 1     | NATIONAL CONFERENCE                    |
|-------|--|
|       | DVANCED MATERIALS &                    |
| M     | APPLICATIONS                           |
|       | (NCAMA - 2018)                         |
|       | 7 <sup>™</sup> SEPTEMBER 2018          |
|       |  |
|       | REGISTRATION FORM                      |
| Nan   | 1e:                                    |
| Cate  | gory: (Tick) Faculty/Research Scholar/ |
|       | PG/UG Student                          |
| Edu   | cational Qualification                 |
| Pap   | er Presentation : Yes/No               |
| If Ye | s, Title                               |
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|       | Signature of the Applicant             |

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PG Department of Physics



07-09-2018

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International Workshop on Materials Technology and Applications was organized by Centre for Crystal Growth, Vellore Institute of Technology (VIT), Vellore, on 11-12 Oct 2018. Eighteen PG students accompanied by Sr. Venci (Asst. Prof) and Dr. N.R. Devi (Asst. Prof) participated in the International Workshop. This workshop was intended to explore the new areas of material science and Technology which includes Crystal growth, Thin film, Nanomaterials, Polycomposites and Materials etc. The PG students enthusiastically participated in the two days workshop and had a wonderful opportunity to listen the expert's lectures from National/International level. They also visited the various labs such as Centre for crystal growth, Thin film and Nanotechnology and Centre for Instrumentation etc.

Number of Beneficiaries: 32



The Management, Faculty, Staff and Students cordially invite you to the Inaugural function of

#### International Workshop on Materials Technology and Applications

Chief Guest Prof. Michal Piasecki

Institute of Physics, J.Dlugosz University Poland

Guests of Honour

Dr. NazmulAhsan

RCAST, University of Tokyo

Japan

Dr. Satoru Yoshimura

RCAMBT, Akita University Japan

Prof. Yoshinori Takashima

Osaka University Japan

Dr. G. Viswanathan

Founder & Chancellor presides.

All are welcome !

Date : 11<sup>th</sup> October 2018, Thursday Time : 10:00 A.M.

Venue : Dr. Ambedkar Auditorium, VIT Vellore

VIT - A place to learn; A chance to grow



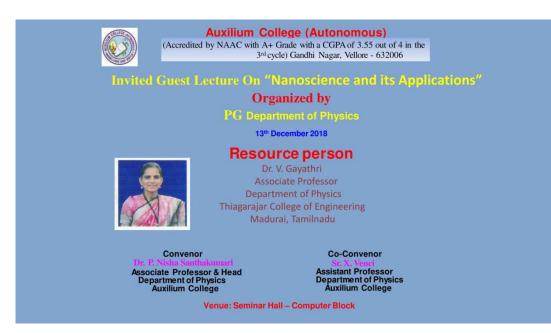
1. Students and national/international delegates



2. PG students and staff with one of the international speaker

As an association activity, Guest lecture was conducted on 13<sup>th</sup> Dec 2018. The chief guest Dr. V. Gayathri, Asso., Prof, ThiyagarajarCollge of Engineering, Madurai delivered a lecture on "Nanoscience and its Applications". She explained the basics of nanoscience and its emerging applications as smart materials in various fields. He also proposed summer research Fellowship programs organized by various institutes like Indian Academy of Sciences, CLRI etc. Overall the talk was an inspiration and source of motivation for UG and PG students.

Number of Beneficiaries: 177





On 31<sup>st</sup> January 2019, Quiz competition was conducted. Twenty-four students were teamed up into six groups. In general physics, 6 different questions were categorized into six different rounds. Based on the marks the winners were announced.

I prize: Margaret Martina N, Swetha S, Swathi D, Roshini B;

II prize: Devika N, Soundarya S.C, Sumitha S, Annal Jebaseeli I.

Number of Beneficiaries: 32





On 15<sup>th</sup> February 2019, Industrial visit to Vainu Bappu Observatory, Kavalur was arranged. Fifteen PG students accompanied by 4 faculty members stayed at kavalur and watched the night sky.

Number of Benificiaries: 18









#### Association Activities (2017-2023) PG & Research Department of Physics Auxilium College (Autonomous)- Vellore- 6

#### Academic year : 2019-2020

#### Activity:1

**The inauguration of Physics association** for the academic year 2019-20 was held on 17<sup>th</sup> July 2019. The Chief guest Dr. P. Seenuvasakumaran delivered the inaugural address and gave a lecture on the fascinating behaviour of **"Low dimensional materials"**. He explained how the physical and chemical properties of the matter can be tailored by bringing down its dimensions up to nanometres. 60 students were benefited.





A group of ten MSc students accompanied by two faculty members attended the celebration of **92<sup>nd</sup> birth anniversary of Prof. M. K. Vainu Bappu**, 10<sup>th</sup> August 2019.Organized by Indian Institute of Astrophysics (IIPA), Vainu Bappu Observatory, Kavalur. An eminent astrophysicist Dr. Tushar Prabhu, Retired senior Prof.,, IIPA, Bengaluru delivered a special lecture on "Stellar Spectroscopy". In the afternoon, speech competition on a specific topic related to astronomy and astrophysics was conducted for the colleges in and around Vellore. The II MSc students presented their speech on "Supernova" and won the second prize.

The winners were:

- 1. Ms. Revathi B, II MSc Physics
- 2. Ms Swetha S, II MSc Physics





#### Activity : 3

**State level seminar** on "Material Science" was conducted on 13<sup>th</sup> September 2019. More than 300 participants including students and academicians of various districts of Tamilnadu participated in the event. The objective of the seminar was to bring together the students and academicians of various fields to discuss on the scientific problems we currently face due to the limits of materials that are available and how they are used. Dr. A Mary Saral, Dean, School of Advanced Sciences, VIT delivered her inaugural address. She enumerated the different types of materials like biomaterials, smart materials and their enormous applications due to change of properties.

Expert lectures were delivered by Dr. A. Ruban Kumar, Prof., VIT, and Dr.R.Arivuselvi, Head & Assoc. Prof., Sri Vidhya Mandir Arts and Science College, Uthangarai. The students actively participated in Poster presentation, quiz and Act play competitions conducted in the afternoon. Dr.M. N. Arumugam, Dept. of Chemistry, Thiruvalluvar University, Vellore, delivered the valedictory address and distributed the prizes and certificates to the winners and participants. Above 300 students were benefited.





Quiz competition



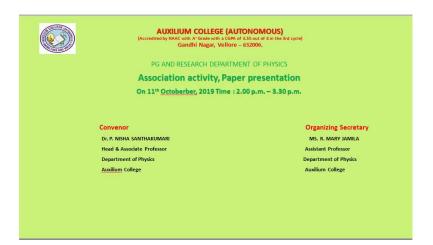
13-09-2019

JAKBEGS - 99949 17367, 96775 11697

#### Activity : 4

As an association activity, **paper presentation session** was conducted on 11<sup>th</sup> Oct 2019 at 2 pm in Computer block seminar hall. About 12 PG students eagerly participated and presented experimental procedures and characterizations on specific research topics. II PG students presented their summer project work on nano-materials, nonlinear materials, fabrication of glass etc. Based on their performance, the following I PG students were declared prizes. 35 students were benefited.

I prize : Ms.P. Raksha II prize : Ms.V.Punitha III prize : Ms. Dhanjana Devi.









As an extension activity, PG students accompanied by faculty members went to nearby village, Thiruvalluvar Nagar on 16<sup>th</sup> Dec 2019. The students along with the faculty members visited the houses at Thiruvalluvar Nagar and interacted with them regarding their issues and sorrows; gave them awareness about the cleanliness and child's education. During the house visit students distributed the grocery items, clothes and other essentials. Later, the students hosted small play activity and competitions for the native children aged between 4 and 12 and distributed the school kits. Overall, this activity would have given an opportunity for students to understand the less fortunate sectors of the society and to extend their assistance according to their ability. 40 students were benefited.

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|--|---|
| PG AND RESEARCH DEP  | ARTMENT OF PHYSICS                        |
| Extension activity at  | Thiruvalluvar Nagar                       |
| On 11 <sup>th</sup> Octoberber, 2019 Ti  | me : 2.00 p.m. – 3.30 p.m.                |
| Convenor   | Organizing Secretary                      |
| Dr. P. NISHA SANTHAKUMARI  | MS. R. MARY JAMILA                        |
| Head & Associate Professor   | Assistant Professor                       |
| Department of Physics  | Department of Physics                     |
| Auxilium College, velllore   | Auxilium College, vellore                 |
|  |   |







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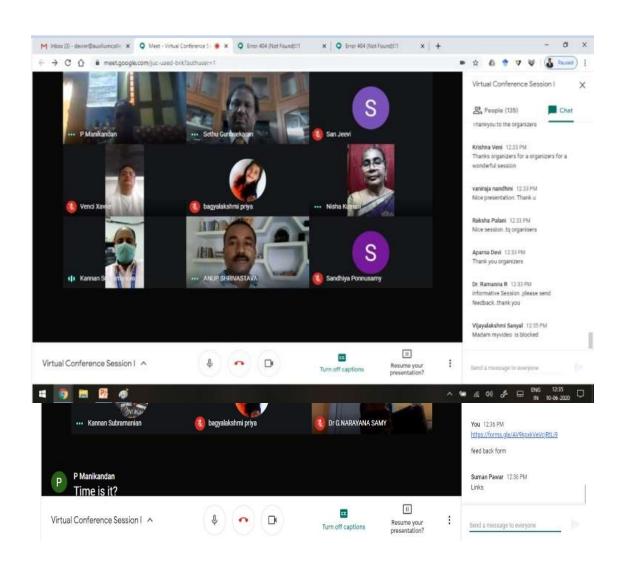
#### Auxilium College (Autonomous)- Vellore- 6

#### Association Activity Report – 2020-2021

#### Activity 1

**National Virtual Conference** on "Novel Materials, Characterization and Applications" was organized by the Department of Physics on 9.6.2020 and 10.6.2020.. Dr. P. Nisha Santhakumari, Convener, Associate Professor and Head, introduced the resource person Dr. S. A. Martin BrittoDhas, Asst., Prof., Dept. of Physics, Abdul Kalam Research Centre, Sacred Heart College, Tirupattur. He delivered the lecture on "Switchable Materials and Applications". Dr. N. R. Devi, Asst. Prof., introduced the resource person Dr. P. Seenuvasakumaran, Associate Professor, Department of Physics, Muthurangam Govt. Arts College, Vellore. He delivered the lecture on "Characterization of Materials by Powder X-ray Diffraction Technique". On 10<sup>th</sup> June, Dr. S. Gunasekaran, Founder of Indian Spectrophysics Association, Dean, Research and Development, St. Peter's Inst. of Higher. Education and Research, Avadi, Chennai delivered the talk on "ATR Technique – A Boon to FTIR Spectroscopy for Characterization of Novel Materials". E-certificates were issued to all the participants. More than 200 participants participated from all over India. Organizers and resource persons get connected through google meet platform and YouTube Live.

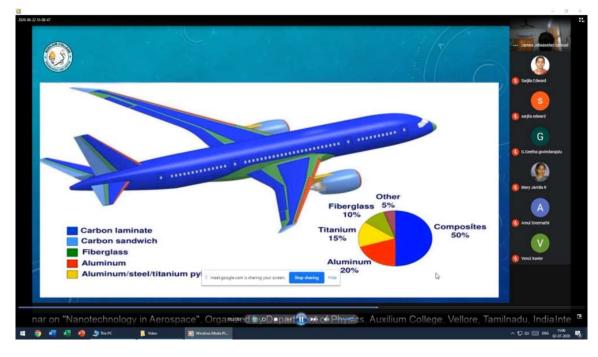




An International Webinar on "Nanotechnology in Aerospace" was organized on Monday, 22nd June 2020 from 10:00a.m. to 12:00 p.m. Dr. R. Sarjila, Assistant Professor, organized the event. Prof. P. NishaSanthakumari, Head, Dept. of Physics welcomed the gathering and introduced resource person of session 1, Dr. V. E. Arkhincheev, Professor, Department of Physics, Buryat State University, Russia. He delivered the talk on "Nanotechnology and its Applications". Sr. X. Venci, Asst. Prof., introduced resource person of session-2, Dr. E. James Jebaseelan Samuel, Sr. Professor, School of Advanced Sciences, Vellore Institute of Technology, Vellore. He delivered the lecture on "Nanotechnology in Aerospace". Mrs. Mary Jamila, Asst. Prof., and Dr. N. R. Devi, Asst. Prof., handled the questions and discussion part of the sessions respectively. E-Certificates were distributed to all the registered participants. More than 150 participants including PG Students, Research Scholars and Faculty from India and abroad (Russia, Singapore, Oman, Muscat and China) participated. 158 participants are benefited through the live sessions via YouTube live platform with chat support.



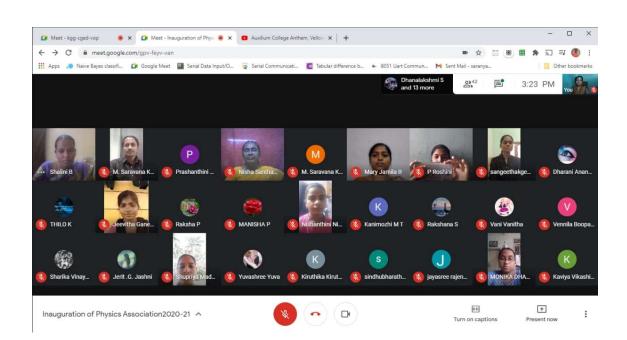




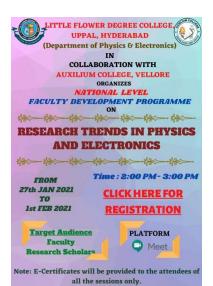
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The **inauguration of Physics association** for the academic year 2020-21 was held on 4<sup>th</sup> November 2020 using Google meet platform. The Chief Guest of the day was Dr. M. Saravanakumar, Assistant Professor, Department of Physics, Muthurangam Govt., Arts College, Vellore. The event started at 2.30 pm with a short prayer service. The chief guest Dr. M. Saravanakumar delivered the inaugural address. He gave a talk on "Smart Materials" and explained how the properties of the materials (piezoelectric, magnetostrictive and shape memory alloy) get changed in response to various conditions such as temperature, light, pressure, voltage, pH and chemical compounds. He also enumerated the wide range of applications of such materials such as shape control, energy harvesting, vibration control and structural health monitoring. 75 students were benefited.

|                 | AUXILIUM COLLEGE (AUTONC<br>(Accredited by NAAC with A' Grade with a CGPA of 3.55 or<br>Gandhi Nagar, Vellore – 63200 | ut of 4 in the 3rd cycle)                              |
|-----------------|---|--|
|                 |   | PHYSICS  |
|                 | Organizes   |  |
|                 | INAURATION OF PHYSICS ASSOCIA   | TION"  |
|                 | 2020-2021   |  |
|                 | On 04 <sup>th</sup> NOV, 2020 – Google meet. Time : 2.30  | p.m. – 3.30 p.m.                                       |
|                 |   |  |
|                 | Dr. M. Saravanakumar,   |  |
|                 | Assistant Professor,  |  |
|                 | Department of Physics, Muthurangam Govt., Arts  | s College, Vellore.                                    |
| Patron          | Patron  | Co-Patron  |
|                 |   | Dr. (Sr.) AMALA VALARMATHY ( Vice Principal – Shift I) |
|                 |   | Sr. JULIANA AGNES VICTOR (Vice Principal – Shift II)   |
| Convenor        |   | Organizing Secretary                                   |
| Dr. P. NISHA SA | ITHAKUMARI  | Ms. Mary jamila  |
| Head & Assoc    | ate Professor   | Assistant Professor                                    |
| Department      | of Physics  | Department of Physics                                  |
| Auxilium Co     | llege   | Auxilium College                                       |
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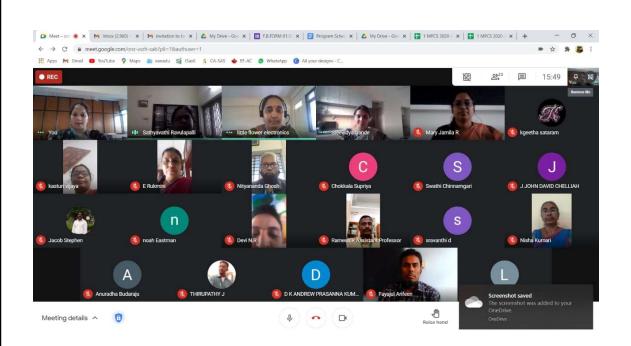


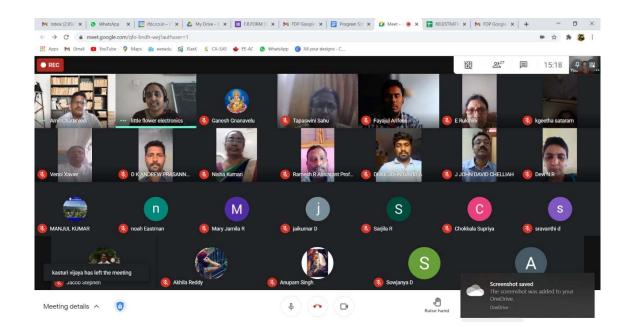
A National level Faculty Development Program (FDP) on "Research Trends in Physics & Electronics" was conducted in collaboration with the Department of Physics & Electronics, Little Flower Degree College, Hyderabad, from 27th January to 1st February 2021. The aim of this FDP was to bring together the emerging & concurrent ideas in the fields of Physics & Electronics onto a common spectrum. The eminent speakers from various reputed institutions delivered their lectures on their field of expertise. Almost 34 participants have participated in 6 days FDP and empowered their knowledge on new realms of Research & Development.





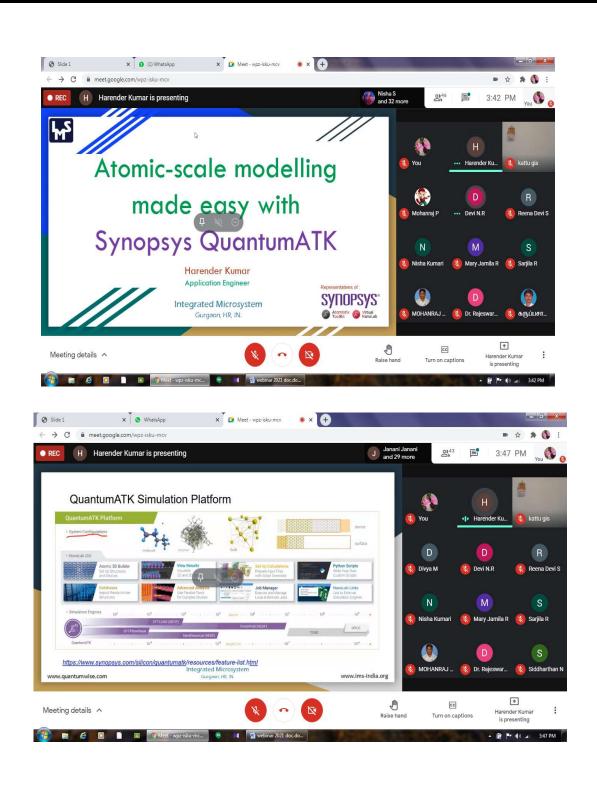
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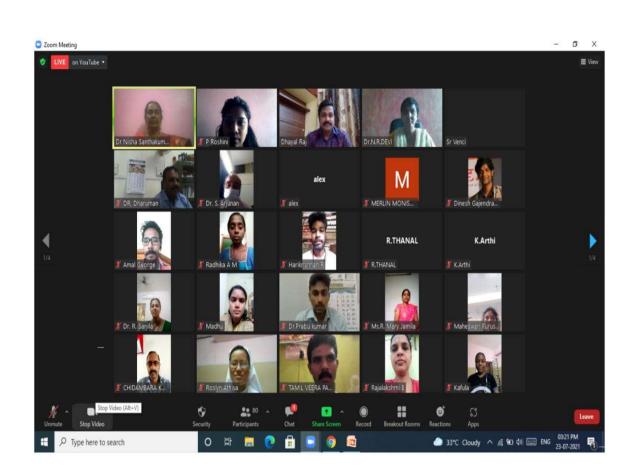




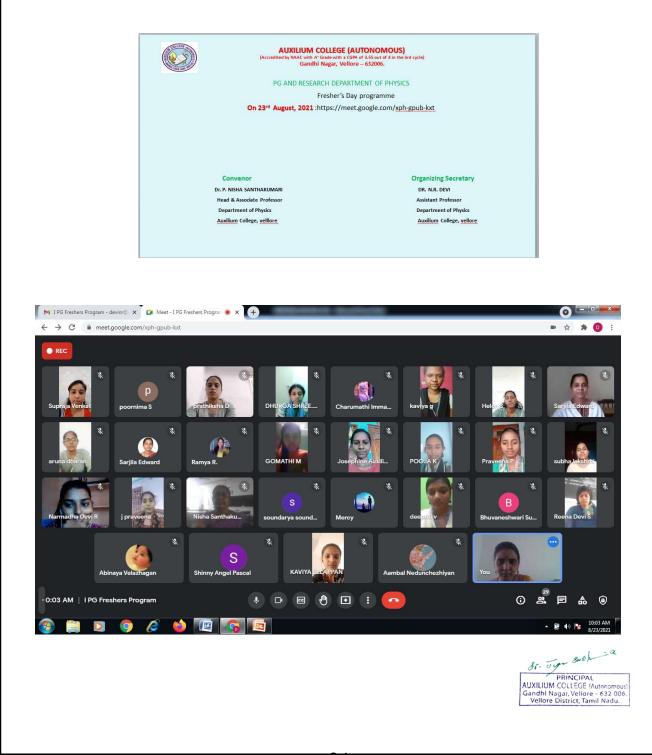
**National Webinar** on "Modelling of Novel materials through Atomistic Molecular Dynamics Simulations " was conducted on 11<sup>th</sup> March 2021,using Google meet platform. The session was organized and hosted by Dr.N.R.Devi, Assistant Professor, Department of Physics. The Chief Guest, Mr.Harender Kumar, Application Engineer, Integrated Microsystem, Gurgaon, delivered his talk on "Atomic-scale modelling made easy with Synopsys Quantum ATK".He gave complete explanation about the software and demonstrated how to use tools in various modelling conditions. It was an interactive session and well appreciated by the participants. Around 60 participants participated from all over India and E-certificates were issued to all the participants.

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|---|---|
| PG AND RESEARCH DE                                | PARTMENT OF PHYSICS   |
| National Webinar on "Modelling of Novel materials | through Atomistic Molecular Dynamics Simulations                                    |
| On 11th March, 2021 :https://n                    | neet.google.com/wpz-isku-mcv  |
|   |   |
| Convenor  | Organizing Secretary  |
| Convenor<br>Dr. P. NISHA SANTHAKUMARI             | Organizing Secretary<br>DR. N.R. DEVI   |
|   |   |
| Dr. P. NISHA SANTHAKUMARI                         | DR. N.R. DEVI   |





Fresher's Day programme for I PG Physics students was organized by PG Department of physics, Auxilium College, Vellore on August 23, 2021 at 9.00 am through Google meet. The programme was headed by Dr.P.Nisha Santhakumari, Head, Asso. Prof of Physics, Auxilium College, Vellore. The programme was organized by the students of II M.Sc Physics to welcome their juniors. The I M.Sc. students participated actively in all the events with more interest.



#### Auxilium College(Autonomous), Vellore

#### **PG Department of Physics**

#### Association Activities Academic Year: 2021-2022

#### Activity I

International webinar on "Sensors and Applications" was conducted during 22-23 July 2021 through Zoom meet and also through YouTube live stream. More than 220 participants including PG students, research scholars and academicians of India and abroad participated in the event. The objective of the seminar was to bring together the students and academicians in India and abroad working on this field to discuss on the importance of Sensors and its various applications in industries as well as in our day today life. The participants actively participated to enhance their knowledge.

**Session 1**:Dr.SriRanjiniArumugam, Senior Scientist, Leipzig University, Leipzig, Germany delivered her talk on Nitrogen vacancy centre in diamond as a Sensor and enumerated its various applications.

**Session 2**:Dr. A. Dhayal Raj, Asst. Prof., Sacred Heart College, Tirupattur. Dr.A. Dhayal Raj delivered a talk on Metal oxide gas sensors and its various applications.

**Session 3:**Mrs. Martin Britto Dhas, Asst. Prof., Sacred Heart College, Tirupattur gave a lecture on Shock wave and explained how it functions as a tool for Sensor applications.

Number of beneficiaries: 220



#### **AUXILIUM COLLEGE (AUTONOMOUS)**

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Gandhi Nagar, Vellore-6, Tamil Nadu, India.

#### International webinar on "Sensors and Applications"

#### 22 - 23 July 2021

#### **Organized by Department of Physics**

#### **RESOURCE PERSONS**

Dr. Sri Ranjini Arumugam Senior Scientist Wilhelm Ostwald Institute of Physical and Theoretical chemistry Leipzig university Leipzig, Germany.

July 22 (3 pm to 4 pm)  $\,-\,$  Nitrogen vacancy center in diamond as a sensor and applications

Dr. A. Dhayal Raj Associate professor, Dept. of Physics

Leipzig, Germany.

July 22 (3 pm to 4 pm)  $-\,$  Nitrogen vacancy center in diamond as a sensor and applications

Dr. A. Dhayal Raj Associate professor, Dept. of Physics Sacred Heart College Tirupattur.

July 23 (2 pm to 3 pm) - Metal Oxide Gas Sensors

Dr. S. A. Martin Britto Dhas Assistant Professor, Dept. of Physics Sacred Heart College Tirupattur.

July 23 (4 pm to 5 pm) – Shock wave: A new tool for sensor applications

PG Students, Research scholars and Faculty members can attend. Free registration. E- Certificates will be provided to those who attend all the sessions and submit the feedback form.

Contact details: Mail id: nishas@auxiliumcollege.edu.in Phone: +91 96298 39040

CHIEF PATRON Sr. Alice K T. Secretary

PATRON Dr (Sr.) Jaya Santhi R. Principal

Co-Patrons Sr. Sumathi M. Vice Principal-Shift I Dr (Sr.) Amala Valarmathy A. Vice Principal -Shift II

#### Coordinator

Co-Patrons Sr. Sumathi M. Vice Principal-Shift I Dr (Sr.) Amala Valarmathy A. Vice Principal -Shift II

#### Coordinator Dr. P. Nisha Santhakumari

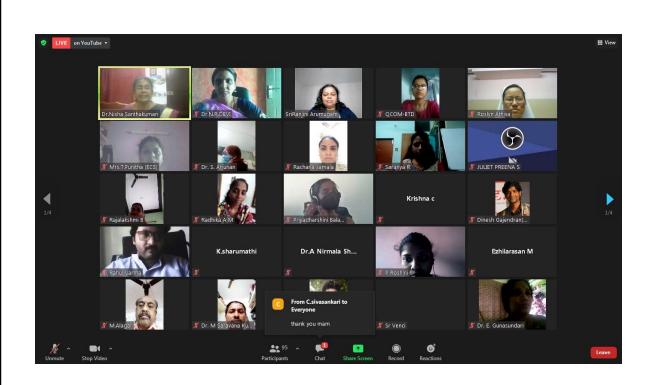
Head of the Dept.

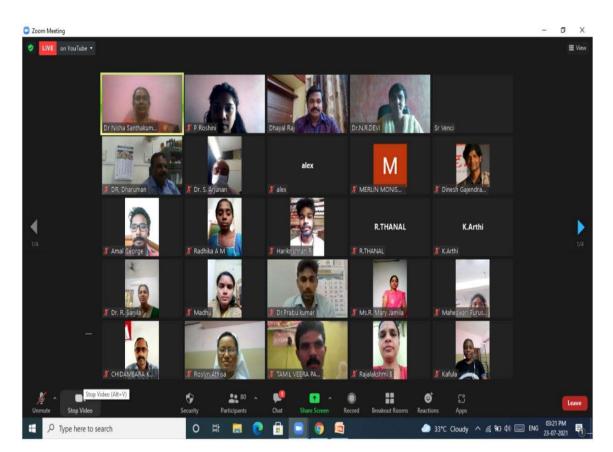
#### **Organizing Committee**

Sr. Venci X. Ms. Mary Jamila R. Dr. Devi N.R. Dr. Sarjila R. Dr. Reena Devi S. Ms. Helen S.



**Google** Meet





The PG Physics Association Inauguration for the academic year 2021-2022 was conducted on 25<sup>th</sup> August, 2021 though Google meet at 3.30 pm. Dr.T.Theivasanthi, Asso.Prof, International Research centre, Kalasalingam University, Madurai was invited as a chief guest. Dr.T.Theivasanthi delivered a talk on Antibacterial activities of silver nanoparticles by blending starch nanoparticles, synthesis of graphene and metal oxide nanoparticles, preparation of medicine from plant nanoparticles for Diabetics and various diseases.

Number of beneficiaries: 39

Invitation:



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Gandhi Nagar, Vellore – 632006.

Organized By <u>PG AND RESEARCH DEPARTMENT OF PHYSICS</u> On 25<sup>th</sup> August, 2021 – Google meet. Time : 3.30 p.m. – 4.30 p.m.

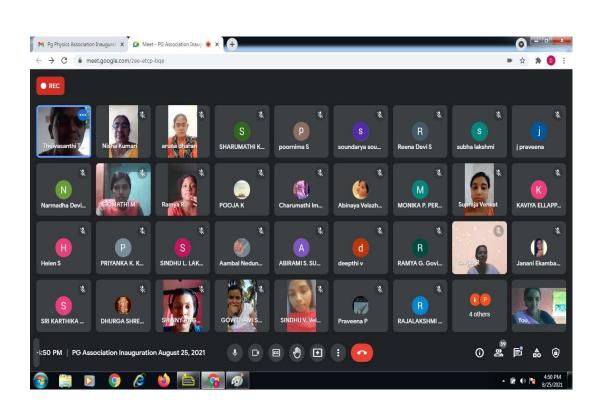
#### **RESOURCE PERSON**

Dr. T. Theivasanthi, Asso. Prof. International Research Centre, Kalasalingam University, Madurai

Convenor

Dr. P. NISHA SANTHAKUMARI Head & Associate Professor Department of Physics Auxilium College Organizing secretary Dr. N. R. DEVI Assistant Professor Department of Physics Auxilium College

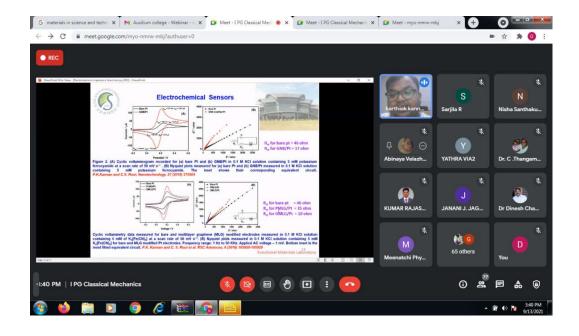




"International Webinar on Emerging Smart Materials in Science and Technology in Modern Era" was organized by PG Department of Physics on 13-14<sup>th</sup> September 2021 at 3 p.m. through google meet. Dr.N.R.Devi introduced the resource person Dr.P.Karthick Kannan, BK21+ Research Professor, Department of Chemistry, Sungkyunkwan University, Republic of Korea and also welcomed the gathering. He enriched us with his unique presentation on "Electrochemical Impedance Spectroscopy" and also explained about electrochemical gas sensors and its applications. The Second session of the webinar started on 14<sup>th</sup> September, 2021 at 3 p.m.through google meet. On behalf of organizing committee Miss. Helen, Assistant Professor, Organizing Secretary (ESMST-2021), Department of Physics, Auxilium College gave a warm welcome speech and introduced the chief guest of the day Dr. E. Senthilkumar, Research Assistant Professor, Department of Physics, SRM University, Kattankullathur, Chennai. He gave his lecture on the topic of "Smart Materials for Science and Technology in Modern Era". He explained about the synthesis of MoWS using CVD. He also explained about the electrical and chemical properties of nanomaterials controlled by adding dopant. He gave outline about 2D nanomaterials Graphene and its optoelectronic device applications.

Number of beneficiaries: 75

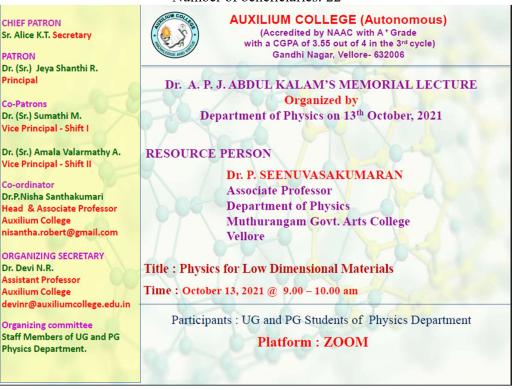






On 13<sup>th</sup> October 2021, Dr. A.P.J. Abdul Kalam's memorial lecture was organized by Department of physics, Auxilium College, Vellore on behalf of his 90<sup>th</sup> birthday celebration and world student's day. It was started at 8.30 am through the platform Zoom. Mrs. Mary Jamila, Assistant Professor, Department of Physics, Auxilium College, Vellore introduced the resource person of the day Dr. P. Seenuvasa Kumaran, Associate Professor, Department of Physics, Muthurangam Govt. Arts college, Vellore and welcomed the gathering. He gave an incredible talk on the topic of "Physics For Low Dimensional Materials" with the outline about the basics of nanoscience and nanotechnology and he also explained about its amazing properties at the nanoscale. He also gave a talk about how we are travelling with physics in our day today life and delivered about metallic nanoparticles and quantum dots.

Number of beneficiaries: 165

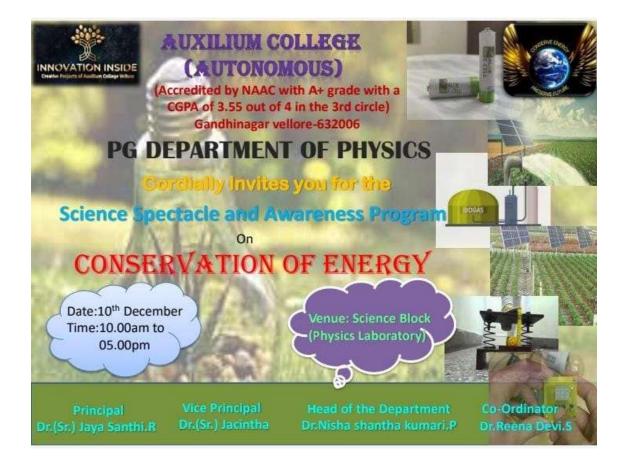


#### Number of beneficiaries: 22



On 10<sup>th</sup> December 2021, Science spectacle and Awareness Program – Science Exhibition was organized by PG Department of Physics in order to give awareness to students about Conservation of energy and energy harvesting. This event was organized by Dr. S. Reena Devi, Co-ordinator, Innovative program, Department of Physics, Auxilium College. Students from other disciplines of Auxilium College, Auxilium School and Auxilium College of education were invited for the exhibition. The program started with a prayer song and was inaugurated with ribbon cutting by Dr.(Sr). R. Jaya Santhi, Principal, Auxilium College and Dr.(Sr). Jacintha, Vice Principal (shift –I), Auxilium College. Many models and posters were presented by PG students focussed on the concept of energy conservation in the field of Solar energy, Wind energy, Mechanical Energy and Sensors etc. Both I and II PG students enthuasitically participated in this event. More than 400 participants visited the exhibition and enriched their knowledge. Participation certificates were given to all the PG students for their active participation and prizes were announced for the best projects and posters.

Number of beneficiaries: 400







Academic Year 2022-2023

# Activity I

A programme for welcoming the IPG Physics students was organized by PG Department of physics, Auxilium College, Vellore on August 1, 2022 at 10.00 am at PG Physics Laboratory.





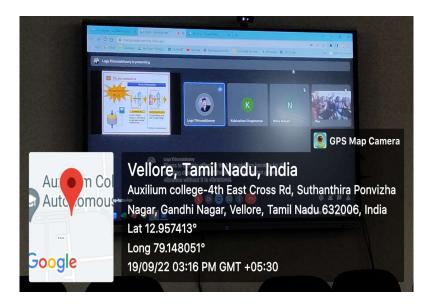
The Physics Association Inauguration for the academic year 2022-2023 was conducted on 17<sup>th</sup> August, 2022 at Computer Block seminar Hall. Rev. Dr. G, Theophil Anand, Assistant Professor, PG and Research Department of Physics, Sacred Heart College, Tirupattur was invited as chief guest. Rev. Dr. G, Theophil Anand delivered a talk on "75 years of India's scientific development and future technologies"





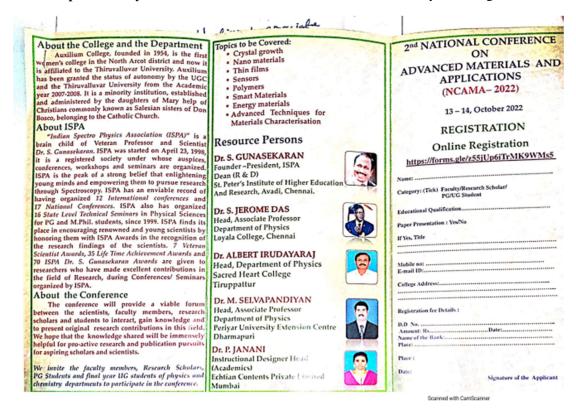
On 19<sup>th</sup> September, "International Video conference" was organized by PG Department of Physics Association in Admin block auditorium via Google meet. Dr. S. Kalainathan, Professor, Higher Academic Grade, Centre for Nanotechnology Research, VIT University, Vellore was invited as a chair person for the programme. Dr.LoguThirumalaisamy, Newton International Fellow, Swansea university, United kingdom delivered a lecture on "Higher Educational opportunities in India and Overseas".

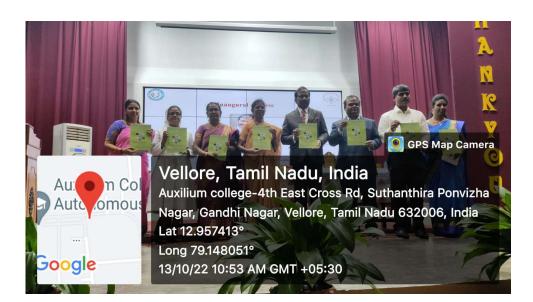




#### Activity – 4

Second National Conference on Advanced Materials and Applications (NCAMA) was organized by Department of Physics on 13-14<sup>th</sup>october 2022 in collaboration with Indian Spectrophysics Association (ISPA), Chennai. The conference proceeding was released by Prof.S.Gunasekaran and its first copy was received by Dr. Sr. Jaya Santhi, Principal, Auxilium College. The first technical session I was started at 11.15 a.m by the chair person Dr. P. Janani, Instructional Designer Head (Academics), Echtian Contents Pvt. Ltd, Mumbai. She welcomed and introduced the resource person of that session Dr. M. Selvapandiyan, Associate Professor& Head, Department of Physics, Periyar University PG Extension Centre, Dharmapuri. He delivered a talk on "Enhancement ff Optical And Structural Properties Of Nonlinear Optical Materials For Frequency Doubling Applications". Dr. P. Janani enriched us with her unique presentation on "Role Of Reflectance Spectroscopic Technique In Diagnosing The Thyroid Disorder And Efficacy Of An Ayurvedic Drug In The Treatment Of **Thyroid**". The first session of Second day Technical session III was started with a prayer song at 9.30 a.m. Dr.Jerome Das, Associate Professor & Head, Department of Physics, Loyola College, Chennai was invited as a resource person. Dr. Dr.Jerome Das presented a PowerPoint on "Research On Materials" and also he delivered about the recent advancement is modern materials. Dr. Albert Irudayaraj, Associate Professor & Head, Department of Physics, Sacred Heart College, Tirupattur, delivered a speech on "Ni doped CeO<sub>2</sub> nanoparticles for Photocatalytic and Photoluminescence applications". Finally the valedictory session of this conference was started at 2.30 pm. This session was presided by Dr. S. Jerome das, Associate Professor & Head, Loyola College, Chennai.





PG Department of Physics organized a paper presentation session for the PG students on 18<sup>th</sup> November 2022 in Admin Block Room No. 1. II M.Sc Physics students presented their summer project work.



On 21st January 2023, twenty three students of PG Physics along with two staff members, Dr. P. Nisha Santhakumari, Head & Associate Professor, Department physics and Dr. N. R. Devi, Assistant Professor, Department of Physics, Auxilium College have visited Visvesvaraya Industrial and Technical Museum, Bangalore.





As an extension activity, the staff and students of PG Department of Physics visited the nearby village "Thiruvalluvar Nagar" on 20<sup>th</sup> February. The students conducted games and Quiz for the students of Panchayat School at Thiruvalluvar Nagar and distributed prizes like note books, pens, color pencils and chocolates. Then we met the women who gathered near the church in the village. Dr.P.NishaSanthakumari gave an encouraging and motivational talk bringing forth the importance of their children's studies. Ms.Charumathi, Ms.Ramya and Ms.Praveena of II M.Sc Physics enacted the concepts of educational quality, cleanliness, savings and unity through a small skit. Finally, the staff members and the students of Department of Physics distributed the rice, Dall, Groceries and other eatables to other village people.





PG Department of Physics, Auxiliumcollege organized a "Motivational Talk" for Pg students on 21<sup>st</sup> February 2023 in computer block seminar hall. Ms. Praveena P. and Ms. Maria Vinita I, of II M.Sc Physics gave the motivational speech. Miss. Praveena P. explained about origin of neutrinos, Neutrino detector 'Supercamiokande' built in Japan, and explained about how we get an information about the whole universe from the detection of neutrinos. Ms. Maria Vinita I. talked on Astrophysics, especially about Black holes, Different types of telescope, Coronal mass ejection from the sun and Solar flare.





As a part of association activity, Quiz competition was conducted for PG students at Admin Block, Room. No. 1 on 2<sup>nd</sup> March 2023. I and II PG students were participated in this event. Quiz was conducted in six different rounds the questions were asked from general physics, identify the name of the scientist and their discovery, fundamental laws, connecting game using physics terms, puzzles etc., The following are the prize winners,

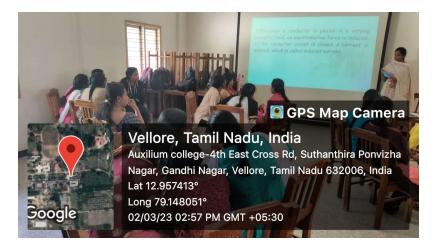
### Ist Prize

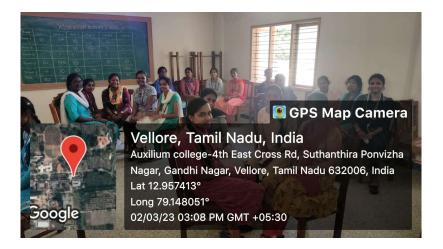
G.Kaviya, R.Ramya, J.Praveena, M.Charumathi

IInd Prize

S. Jeffi Jas, P. Praveena, A. Josephine auxilia Mary, S. Bhuvaneswari

IIIrd Prize Dhurga Shree K.C, Narmadha Devi R, Subhalakshmi R, Kesava |Priya A Janani E.K, Poornima S, Soundarya S.S, Evangelin Lilly I





Activity - 10

As a part of Association activity, "Game challenge in Physics" competition was conducted for PG students at Allied Physics Laboratory on 18<sup>th</sup> April 2023. Twenty six PG Physics students participated in this event. They were divided into six groups. Competition was conducted in six different rounds. The prize winners are,

Ist Prize A.Kesavapriya (I M.Sc), M.Charumathi (I M.Sc), A.JosephineAuxilia Mary (II M.Sc) V.Supraja (II M.Sc) IInd Prize B.Prathiksha (II M.Sc), S.Jeffi Jas (I M.Sc), E.K.Janani (II M.Sc), P.Praveena (II M.Sc) IIIrd Prize R.Ramya (II M.Sc), S.S Soundarya (II M.Sc), E. Kaviya (II M.Sc), J. Evangelin Lilly (I M.Sc) V. Abinaya. (II M.Sc)





