

# FATIMA MATA NATIONAL COLLEGE

AUTONOMOUS

(Reaccredited with 'A' Grade by NAAC)

Affiliated to University of Kerala



3.3.1

Report Shasthrajalakom'

**IQAC** INTERNAL QUALITY ASSURANCE CELL



**'SASTHRAJALAKOM': RESIDENTIAL  
PROGRAMME  
STATE INSTITUTE OF EDUCATIONAL  
TECHNOLOGY (SIET), GOVT. OF KERALA  
INTERNAL QUALITY ASSURANCE CELL  
FATIMA MATA NATIONAL COLLEGE  
(Autonomous)  
KOLLAM-1**



**REPORT**

**‘ശാസ്ത്രജാലകം’ – THREE DAY RESIDENTIAL WORKSHOP FOR THE  
SELECTED 9<sup>TH</sup> CLASS STUDENTS OF KOLLAM DISTRICT  
SPONSORED BY: STATE INSTITUTE OF EDUCATIONAL TECHNOLOGY  
(SIET), GOVT. OF KERALA**

‘ശാസ്ത്രജാലകം’-2019, started by around 9.00 am on the 21st of November, 2019 at Fatima Mata National College, Kollam. The students along with their parents reached much earlier than the scheduled time. After the initial registration process, the inaugural session of the 3 day science program started at 10 am. Dr Shaiju P.N., Co-ordinator of ശാസ്ത്രജാലകം, welcomed the invited dignitaries and the students to this program. The ceremony was presided over by Dr Vincent B. Netto, Principal, Fatima Mata National College, Kollam. Shri. Aburaj, Director, SIET inaugurated the ശാസ്ത്രജാലകം -2019 and delivered the inaugural address. Rev Dr Rolden Jose Jacob delivered the benedictory address. Dr Rubin Jose A.S, coordinator, Science Facilitation Centre FMN College, delivered the vote of thanks. The inaugural session was over by 10:45 after which tea was been provided for the students and their parents. Then, before the start of the next session the students were made aware of their respective groups and a MSc final year student of Physics department of FMNC were served as a mentor for each of the 8 groups.

The first session was a symbolic introduction to what the students should expect from this 3 day program. The session was on General Physics. Mr Ratheesh Kumar R, Assistant professor (Department of Physics) lead the session and was been introduced by Mr. Gokuldas C of 2nd year MSc physics. The students were made aware of some of the basic concepts in physics. The humorous attitude of Mr Ratheesh Kumar made the class engaging. He explained the concepts using video clips so that the students were exactly clear about what they here. The session ended at 12.40 pm and was followed by the



lunch break. The students were instructed to be with their respective groups and were guided by the group mentors. Meals were arranged in the college canteen, where each group along with their mentor shared a single table and it helped a lot in having a good interaction between the students and their mentors. It also helped to give a feeling of comfort for the students inside a strange campus, for them.

The afternoon session started at 1.30 Pm. Dr Jojo P.J ,Assistant Professor (Department of Physics) lead the session and was introduced by Ms. Ancy Mary of 2nd year MSc physics. The class mainly dealt with how an experiment is to be carried out, in general, and what it's significance was. Dr Jojo P J made this session interesting, that the students were also made to interact with him. The lecture was over by 3 pm.

The mentors made sure that the feedback forms were filled by their group students after each session. Both the lecture sessions were closed after an experience being shared from one among the students. Tea and snacks were provided for the students. Then the students were directed towards the BSc physics lab of our college for the practical session. Mr Sunil .A, Assistant Professor (Department of Physics) gave a clear introduction to what is going to happen during the lab session and demonstrated some physical phenomena happening around us and briefly explained the physics behind all those things. Mr Ben Byju, and Mrs Shyma Mary, Assistant professors on contract (Department of Physics) were together with the students to help them out in explaining what is happening around. Various experiments were arranged, and the final year MSc students headed up in explaining each and every experiment displayed. The students went through all the experiments as groups. All the teachers and other staffs of the department were active during the whole 2 hours of the lab session, which ended up at 5.30 pm.

After around 5-10 minutes travel from the college in the bus provided, they reached Animation centre, Kottiyam where the accommodation was setup. The place was beyond explanations, and provided a calm and satisfying atmosphere for the students, mentors and staffs along with them. After being settled

initially, the students were instructed to be in the hall for the dinner by 8 pm. The dining hall allocated was big enough to withstand the whole capacity of around 70 and we had a delicious dinner out there.

The final session of the day, Science Quiz Competition, started at 8.30 pm. The students were divided into groups of 2 members and preliminary round were conducted by the MSc students. Six teams were shortlisted based on their preliminary round scores, and the final round was conducted. The final consisted of 4 rounds. Team comprising of Resna Remesh and Durga Anil P won the first prize. At 9.45 pm the instructions were given for the students about the upcoming day and the mentors took initiative to get the feedback form filled by their respective group members and by 10 pm the programs for the inaugural day of ശാസ്ത്രജ്ഞാലയം-2019 ended.

The second day's proceedings started at the Bishop Stanley Roman Hall, with new group of mentors from Department of Chemistry. The second day was for the deliberations on Chemistry. The first lecture was made by Dr. Biju Mathew, Assistant Professor of Chemistry, and he interacted with the students on Basic Principles and Practices in Chemistry. At 11 am tea and snacks were served followed by the lecture on Applied Chemistry, which was made by Dr. Shibu Joseph, Assistant Professor of Chemistry. Lunch was served by 12.30 pm. The practical sessions on Chemistry was started at 1.30 pm at the Chemistry Hall, which was organized in two sessions lead by Dr. Suma and Dr. Mary Nancy, Assistant Professors of Chemistry. In between the sessions tea was served. At 5 pm a campus tour was organized, by which the students were able to see the nuke and corners of FATIMA campus. At 6 pm a cultural evening was arranged by the title FATIMA Band at the Bishop Jerome Hall. The programme was presented by the iconic artists of FATIMA, which was enriched by some smart involvements from some talented participants. The programme came to an end at 7.30 pm. Then the whole team reached the Christu Raj Animation Centre, Kottiyam, where the dinner was taken at 8.30 pm. This was

followed by the some brilliant activities by the participants and mentors. The whole team went to bed at 11 pm.

The final days schedule was dedicated to the discussions on Biology. The day started with a smart lecture by Dr. Vijayasree, Assistant Professor (on contract) of Zoology. The session was arranged at the Botany Seminar Hall. The topic of the talk was CELL BIOLOGY. Besides giving a brief idea about the various aspects of Biology, she emphasized on the structure of the Cell and function of the various cell organelles. This was followed by the next session, which was on Botany. This session was engaged by Dr. A.S. Rubin Jose, Assistant Professor of Botany. The topic of the discussion was TISSUE CULTURE. Both sessions were very informative and the video clippings displayed during the session was instrumental in triggering interests among the students. At 11.30 pm tea and snacks were served, which was followed by the practical session on Botany. This session was handled by Ms Nirmala Jeyarani J., Associate Professor of Botany. Practical demonstrations were performed such as Mitotic Preparation in Onion roots, DNA extraction from coconut endosperm, plant pigment separation by Column Chromatography and bacterial staining. Some of the major instruments were also introduced to the students. The lunch was provided at 1 pm.

The practical session on Zoology was started at 2 pm at the Zoology Laboratory. The resource person was Ms Nisha Thomas, Assistant Professor of Zoology.

At first the eukaryote cell was introduced to the students from the **buccal epithelial tissue**.

The second practical was chosen from **PHYSIOLOGY**. After briefing them about what this field of Biology dealt with, it was proceeded to demonstrate

- (a) **Blood typing and Preparation of the human blood smear and observation of the human blood cells.**

In this session the resource person spoke about the various blood groups present in the human population and the significance of blood grouping. The principle of the practical was also taught. Besides demonstration, an opportunity was given for interested students to perform the practical. Besides this, prior to preparation of the blood smear (which was also demonstrated), a class on the types of the human blood cells was given and the cells were shown under a binocular microscope.

(b) **Analysis of urine for abnormal constituents like glucose and albumin**

As the students were currently studying about the various human systems, it seemed appropriate that they know how Diabetes mellitus and albuminuria could be detected by analysing one's urine. The reason for the presence of these constituents in a person urine was explained before the demonstration.

Next on the list was an **EMBRYOLOGY** practical which involved the display of a chick embryo taken live from fertilised eggs which were kept in the department incubator. The initial stages of embryo development were taken out from the egg and shown under a dissection microscope.

The demonstration then proceeded towards the final part of the session, the **TAXONOMY** session where representatives from all the invertebrate as well as vertebrate phyla were displayed. The "Siamese twins" was the centre of attraction. The characteristics of the phyla as well as the specimens were explained. Before this, we also demonstrated how the locomotory structures of earthworm i.e. setae could be viewed under a microscope.

Finally the whole team was led to the Department museum. The wonderful and very interactive session came to an end by 3.30 pm.

The valedictory session started at 3.35 pm at the Bishop Stanley Roman Hall. The meeting started with an invocation by FATIMA choir. Dr. Jojo P.J., Associate Professor of Physics welcomed the gathering. Ms Greta Ildaphonsa, Vice Principal, FMNC, delivered the presidential address. The valedictory

address was made by Prof (Dr) A. Gangaprasad, Dean of Science, University of Kerala. Prizes for the winners of the Quiz competition was distributed. Then three participants shared their experiences, followed by certificate distribution. Sri. Reghunathan Pillai, ET Club Co-ordinator, expressed the vote of thanks. The meeting came to an end at 4.30 pm, which was followed by High Tea. The team dispersed at 4.50 pm.





























