

# REPORT ON AN EDUCATIONAL TOUR

## INDIRA GANDHI CENTRE for ATOMIC RESEARCH , kalpakkam , Chennai

By

2<sup>ND</sup> MSC PHYSICS STUDENTS

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An education tour was organized by physics department ,Govt college(A)Rajahmundry, to visit IGCAR(Indira Gandhi Center for Atomic Research) at KALPAKKAM on the Dt-19-08-2022. The tour comprised students of M.Sc. 2<sup>nd</sup> year Physics students accompanied by faculty members P.V.SATYAJI sir ,SK Esub BASHA sir and B.DURGA LAKSHMI mam from department of physics. All the students were directed to gather at college at 2:00pm on 18-08-2022. Our college principal R.DAVID KUMAR SWAMY sir & HOD physics department. Dr.T.K.VISWESWARA RAO sir wished all students have best and safe journey.

We started our journey in Rajahmundry at 3<sup>o</sup> clock by train reached on 8:00am (19-08-2022) at IGCAR Atomic Energy Township. Usha madam and her team members warmly welcomed all of us and provides accommodation for us. After that all students along with faculty members were taken to the site IGCAR, where the nuclear research center is located, it is the second largest establishment of the department of Atomic Energy next to BARC located at Kalpakkam.

The India's Three stage Nuclear power program :

Stage 1: Pressured Heavy Water Reactor (Thermal Reactor)

Stage 2:Fast Breeder Test Center(FBTR)

### Stage 3: Thorium Based Reactor (TBR)

FBTR (The stage 2 Reactor) is developed at kalpakkam to produce 500MW of electricity.

In this visit we had a very clear and Real experienced how the Reactor works, its main components, the working principles of electricity raw materials, what is the requirement, what happens inside core, coolant, controller etc. After the FBTR visit we visited several research blocks within the township such as Lung monitor Research block, Sodium aerosol detection block. ONERS (online Nuclear Emergency Response System) to detect Radiological effects, Radiation detector block, and TLD et c the work which is going in these departments are very technical and useful to the society and people who are working in FBTR.

After that we visited Mahabalipuram is a town on a strip of land between the Bay of Bengal and Great salt lake , in south india state of Tamilnadu ,we also saw mahhabalipuram temple and beach beside it.

On the next day we reached Chennai city and visited CROCODILE PARK which has 2000 varieties of crocodiles, and after completion of lunch we visited BIRLA PLANITORIUM at Chennai. Then we departed from Chennai and returned to Rajahmundry in the next day morning.

Overall it's a new experience to me and class members ,we learned a lot of new things and how far INDIA is going in the research field .

Sincere thanks to B.DURGA LAKSHMI mam dept of physics Rjy, P.USHA mam and M.PADMA mam who played a major role in visiting of IGCAR. And special thanks for the members who are demonstrated various sectors in IGCAR.

Sincere thanks to P.V.SATYAJI sir and Esub.BASHA sir who lead and coordinated through out the trip, Humble thanks for our Hod Dr.T.K.VISWESWARA RAO sir, our principal R.DAVID KUMAR sir for everything you have done to make this happen and allowing us to be part of this great experience.

*The journey started with a lot  
of Energy & Encouragement*



















*The trip was completed with the same Energy  
& Encouragement.*

*Once again thanks to each and every one ,  
we are happy to be a part of this journey. . .*