

ADIKAVI NANNAYA UNIVERSITY: RAJAMAHENDRAVARAM
UNIVERSITY COLLEGE OF ENGINEERING

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A REPORT ON INDUSTRIAL VISIT
TO

Visvesvaraya Industrial and Technological Museum

An industrial visit to Visvesvaraya Industrial and Technological Museum (VITM), Bangalore has been organized by Department of Electronics and Communication Engineering of ADIKAVI NANNAYA UNIVERSITY, University College of Engineering Rajahmundry, 50 students of B. Tech IIIrd year on 19-October-2022 who were accompanied by three faculty members, Mr. A. Vijaya Durga Asst.Prof., Mr. P. Venkata Ratnam Asst.Prof., Smt.Lakshmi Bhai.

The objective of the visit was to provide a Technical Exposure to the students about Space Technology and advancements in Technology. The visit not only provided a good insight into the quality of research happening in the area of space technology but also gave great exposure to the students about the future career prospects and areas of research in applied sciences.



About VITM (Visvesvaraya Industrial and Technological Museum)

The Visvesvaraya Industrial and Technological Museum, (VITM), Bangalore, India, a constituent unit of the National Council of Science Museums (NCSM), Ministry of Culture, Government of India, was established in memory of Bharat Ratna Sir M Visvesvaraya. The building, with a built-up area of 4,000 m² (43,000 sq ft), was constructed in Cubbon Park. It houses various scientific experiments and engines, and was inaugurated by the first Prime Minister of India, Pandit Jawaharlal Nehru, on 14 July 1962. The first gallery set up at VITM, on the theme of 'Electricity', was opened to the public on 27 July 1965.



In the year 1970, VITM launched the Mobile Science Exhibition (MSE) with 24 participatory exhibits mounted on a bus. The MSE Bus travels throughout South India, and it continues to be a very effective tool for science communication in the rural area as the bus carries with it a portable planetarium, telescope for night sky observations, HD large screen

TV for science film shows in the evenings, materials for conducting popular science shows and demonstrations aimed towards the general populace.

In 1978, the science museums/centres including VITM were delinked from CSIR and brought under a newly formed society registered on 4 April 1978 as National Council of Science Museums (NCSM). In 1979, an extension was added to the building, increasing the total area of the museum to 6,900 m² (74,000 sq ft).

NCSM set up three additional science centers at Gulbarga (Karnataka) in 1984, Tirunelveli (Tamil Nadu) in 1987 and Tirupati (Andhra Pradesh) in 1993, which are functioning under the direct administrative control of VITM. Thus, VITM has become the southern zone headquarters of NCSM.

Summary of the Visit

One bus with students started from ADIKAVI NANNAYA UNIVERSITY, University College of Engineering Rajahmundry at 9:30 A.M. on 19/10/2022.



We Reached Rajahmundry Railway Station. then we move from Rajahmundry railway station to Bangalore via Vijayawada. We reached Bangalore at 10:00 A.M, on 20th Oct 2022 where accommodation was provided to the students and faculty at Hotel Surya Residency, Gandhi Nagar, Majestic, Bengaluru. After Breakfast, we started to CSIR-NAL (Council of Scientific and Industrial Research-National Aeronautics Limited) and next day 21/10/2022 we visit Indian Space Research Organization (ISRO) U R Rao Satellite Centre (URSC), afternoon we visit Hindustan Aeronautics Limited (HAL) Heritage Centre & Aerospace Museum. Next day 22/10/2022 we visit Visvesvaraya Industrial and Technological Museum (VITM) at Bangalore.

After several security checks and administrative formalities, Students and faculty to allow in to Organization.

VITM

This was one of the unique museums that we have seen. It is the special attraction in Bangalore. It is none other than Visveswaraya industrial and technological museum. Great zone of learning for children and students. We went there around 10.30 A.M, we have taken entry ticket and went in the museum. At entrance, after a security check, there is a statue of Sir MokshaGundam Visveswaraya. There are several floors and the first floor of the museum contains engine section.

Engine section

In many museums, they don't allow visitors to take the photographs and to touch the items in the museum. But here surprisingly, they have allowed to even play with the items in the museum. This plays an important and easiest way for children to learn science quickly. In this section mainly they have displayed evolution of science especially levers, tools, gears, evolution of clocks, sewing machines, typewriters, telephones and printing machines. There are some displays and working models. The hall has interactive exhibits to explore the principles of Simple machines, mechanisms, drives, prime sources of power, engines and their working, transfer of energy and the 1:1 replica of Wright Brothers flyer supported with the first ever Wright Brothers' flyer simulator. The gallery has several artifacts which adds to the educational and historical value of the display Students can easily understood the basic science easily.



Engine Hall



Early aircraft engine

Then we proceeded to Various Galleries and facilities available in the VITM and are explained one by one.

Galleries and Facilities (Education and Entertainment):

Machines help us to reduce effort, enhance the delivery time, and produce repeatedly the same product with no variation and many more advantages. We use them without realizing its presence around us. The exhibits in the gallery explain fundamentals and working of some of the basic machines through interactive exhibits. Exhibits on Pulley system, Gears, different ways of transferring motion, reducing effort by levers, inclined plane, screw etc. introduces the visitors to the

story of simple machines. Another section deals with the application of these simple machines in our daily life. There are answers to: How a Ball point pen works, the zipper that we use in almost all our clothes and covers etc.? We understand these through interactive exhibit.

Electrotechnic gallery

This gallery brings ahead the principles of electricity & magnetism, Generation of electricity, Static electricity, Evolution of computers and several other concepts in this field in an interactive way. The Spark Theatre with live demonstrations using Van de graph generator, which we have studied at our B.Sc, and several other static electricity devices is a spectacular interactive show for visitors of all age groups.



Fun Science gallery

This gallery is focused towards bringing some of the basic principles of science and technology in an interactive way. The science experienced in daily life is brought out with a fun element. This gallery is also acts as a resource to supplement science education in the school. Natural and manmade phenomenon's are appreciated by interacting with exhibits through fun and entertainment.



Space-Emerging Technology in the service of mankind gallery

It has always been an amazing when one hears about the experiences of astronauts and space scientists. In this departments, they have shown the rare pics of astronauts, like first astronaut to go into space, then they have shown how rockets are launched, about astronauts, space programs, satellites, space shuttle and important events of space occurred in the world. In that they had shown the details of Chandrayaan and Indian astronauts Kalpana Chawla, Rakesh sharma and Sunitha Williams. This gallery has exhibits related to the science of Flight Mechanics, Rocket launching etc. A working exhibit explains how satellites are launched. Several type of rockets and satellites, space applications, milestones in space technology & space theatre form the part of the gallery. Mangalyaan, Chandrayaan etc. are added to keep the efforts of India in Space updated.



Educational and outreach activities:

Three shows were conducted by the museum to gain more knowledge by students. They are

1. Taramandal show
2. Science show
3. 3D fun show

Taramandal

Taramandal means group of stars. For this after taking the ticket we went into a air filled plastic balloon like structure. There is one instructor and a projector. There they have told that shapes formed by the stars are called Constellations, they have also said that there are 88 constillations. There they had projected those shapes on the plastic wall and explained about prominent stars in them. After that they had created a sky full of stars at night with projector and in them, they had shown the constillations, prominent stars etc. It is an inflatable dome planetarium



having seating capacity of 30 allows the visitors to experience and explore the night sky – stars, constellations, zodiacal constellations, diurnal motion of planets etc. This show is interactive unlike a regular planetarium show. The narrator is available to the visitors to answer questions and visitors are required to do some hands on activity as well making astronomy interesting.

Science shows

After Tara mandal show, we went to Science show which is held at 3.30 p.m, In this show they will



do some magic tricks and explains the scientific reasons behind them. It is as if like a magic show. We witness, perform and be a part of exciting science shows on ‘Science is Fun’, ‘Unexpected Science’, ‘Liquid Air’. ‘The Wild spirit’, ‘Marvels of Sound’ etc.

Science Demonstration lecture (SDL)

Open to the school groups this program discusses the curriculum-based topics like ‘Vibrations’, ‘Basics of Electricity & Magnetism’, ‘Acids-Bases and Salts’, ‘Color chemistry’, & ‘Basics Electronics’ etc. Each concept is supported with demonstration making understanding easy.



3D Fun show

Everyone said this is the main attraction in the museum. We bought tickets and went inside the theatre which have 50 members capacity. They had provided 3D glasses to everyone. In that show they had given message not to cut the forests and they had shown the effects of global warming in 3D effect.

Students Share Visvesvaraya Industrial and Technological Museum (VITM), Experience

Some of the students, share their industrial visit to Visvesvaraya Industrial and Technological Museum (VITM) at Bangalore, Some students experiences they are P.S.S Premkumar, D.T.V Sai Kumar, P.Sandeep, M.Amrutha Sai, N.Hema Latha are shared their experiences on a industrial visit to VITM, Bangalore visit in the form of a presentation on the purpose, utility and experience of the visit. “Its objective is to provide space related techniques for India. The VITM Museum visit was quite enlightening and exciting. For the students it is a must place to visit to gain knowledge on almost every field of science. I myself had a great time here and gained some knowledge. We enjoyed the museum very much.

- ❖ A News Paper Article regarding Adikavi Nannaya University, Engineering 3rd year Students visit Visvesvaraya Industrial and Technological Museum (VITM), Bangalore at Bangalore.

ఇంజనీరింగ్ విద్యార్థుల ఇండస్ట్రియల్ విజిట్



19.10.22 (మీడియాసెల్) ఆదికవి సన్నయ్య యూనివర్సిటీ కాలేజ్ ఆఫ్ ఇంజనీరింగ్, డిపార్ట్మెంట్ ఆఫ్ ఎలక్ట్రానిక్స్ అండ్ కమ్యూనికేషన్ ఇంజనీరింగ్ ఆధ్వర్యంలో బెంగళూర్ లోని వలు ప్రాంతాలకు ఇండస్ట్రియల్ విజిట్ కు వెళ్ళారు. బుధవారం యూనివర్సిటీ కాలేజ్ ట్రివిధాల్ డా.వి.వెర్మిన్ ఇండస్ట్రియల్ విజిట్ ను బెంగాళురు ప్రారంభించి వివరాలను తెలియజేశారు. వీరీ ఆచార్య మొక్కా జగన్నాథరావు ప్రోత్సాహంతో యూనివర్సిటీ కాలేజ్ ఆఫ్ ఇంజనీరింగ్ విద్యార్థులకు మెరుగైన అవకాశాలను కల్పిస్తున్నామని, ఎ.బి.సి.టి.ఇ. గర్భింపుతో కూడిన నాణ్యమైన ఇంజనీరింగ్ విద్యను అందిస్తున్నామని

అన్నారు. పాఠ్య ప్రణాళికలలో భాగంగా 19వ తేదీ నుండి 25వ తేదీ వరకు డిపార్ట్మెంట్ ఆఫ్ ఎలక్ట్రానిక్స్ అండ్ కమ్యూనికేషన్ ఇంజనీరింగ్ విద్యార్థులను బెంగళూర్ ఇండస్ట్రియల్ విజిట్ కు పంపిస్తున్నామన్నారు. బెంగళూర్ లోని సి.ఎస్.ఐ.ఆర్ - నేషనల్ ఎరోస్పేస్ రెజోర్టర్, ఐ.ఎస్.ఆర్.ఓ - యు.ఆర్.రావు

శాటిలైట్ సెంటర్, శ్రీ మోక్షగుండం విశ్వేశ్వరయ్య మ్యూజియం వంటి ప్రాంతాలను సందర్శిస్తారని చెప్పారు. ఇంజనీరింగ్ లోని అడ్వూజులను అవిష్కరించిన ఇటువంటి ప్రాంతాలలో పర్యటించడం ద్వారా విద్యార్థులకు ప్రేరణను ఇంజనీరింగ్ విధానాలు అలవాటు అవుతాయన్నారు. ఇంజనీరింగ్ లో మెరుగ్గా రాణించడానికి ప్రోత్సాహకంగా ఉంటుందన్నారు. ఆధ్యాపకుల మార్గదర్శకంలో విద్యార్థులు ప్రమోదించుకోవడం ఇండస్ట్రియల్ విజిట్ ను పూర్తి చేసుకొని రావాలన్నారు. ఈ కార్యక్రమంలో కోర్సు కోఆర్డినేటర్ డా.బి.సుధాకర్, డా.వెంకటరత్నం, లక్ష్మీభాయ్ మరియు విద్యార్థులు పాల్గొన్నారు.