GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY
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Gangavaram (V), Kovur(M), SPSR Nellore (Dt), AP, India- 524137, www.gist.edu.in

Department of Electronics and Communication Engineering

A.Y: 2024-25

Industrial Visits – Organised

S No.	Name of the faculty	Name of the Company/ organization& Place	Contact person with Phone & Email ID	Course / Class	Focused area/topic	PO/PSO Mapped	No. of participants	Date/s
1.	Mr.Ch. Suresh	IIT,Tirupathi	HR Manager	II-ECE	Development of Software	PO1,PSO2	85	22-08-2024
2.	Mr.Ch. Suresh	Gowri Software Solutions Bangalore	Mr.Prabhakar prabhakargudi@gmail.com: 080-23147799 , 91-9986754997	IV-ECE	Software Development	PO1,PSO2	42	03-09-2024 to 05-09-2024
3.	Mr.G. Shanmugavel	REC Idea Factory	Dr. M. Palanivelan	III ECE	Drone Design and 3D Printing	PO1,PSO2	31	08-10-2024
4.	Mr.Ch. Suresh	SDSC SHAR	HR Manager	III-ECE	Software Development Cycle	PO1,PSO2	109	07-01-2025

Faculty Coordinator

HoD ECE

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Report on One Day Industrial Visit to IIT, Tirupathi on 22-08-2024

The department of Electronics and Communication Engineering organized One Day Industrial Visit for II B.Tech ECE-A,B&C Students to "IIT,TIRUPATI" on 22-08-2024. IIT Tirupati, established in 2015, is one of the newer Indian Institutes of Technology (IITs) set up by the Government of India. It is located in the city of Tirupati in the state of Andhra Pradesh. Initially, the institute operated from a temporary campus at Krishna Teja Educational Institutions. However, the permanent campus, located in Yerpedu, near Tirupati, is under development and partially functional. The campus is designed to be eco-friendly with state-of-the-art facilities

IIT Tirupati offers undergraduate (B.Tech), postgraduate (M.Tech, M.Sc), and doctoral (Ph.D.) programs in various engineering, science, and humanities disciplines. The institute emphasizes a strong foundation in core subjects along with research and innovation. The institute places significant emphasis on research, with faculty and students working on projects funded by various national and international agencies. Collaborative research with industries and other academic institutions is also encouraged.

Students at IIT Tirupathi have a vibrant campus life with various clubs and societies catering to diverse interests like coding, robotics, literature, music, and sports. The faculty at IIT Tirupathi consists of experienced educators and researchers who are alumni of prestigious institutions both in India and abroad.

As a part of Industrial visit we arrived at IIT TIRUPATI at 10:00 am. We were assembled to the Auditorium of TC-1. There we had a interaction session with Dr.K.Naveen Professor& HoD in EE dept. In this Session sir covered the history about IIT, TIRUPATI, admission process, offered courses, research activities, Infrastructure details and facilities provided by IIT, TIRUPATI. After Completion of this Session, we covered visiting Central Library, Surgical and Assistive Robotics, Graphics-Visualization-Computing-Lab, Graphics-Visualization-Computing-Lab, High Density Electronic Systems Lab, Networking and Communication Lab and IKS research Lab. After completion of laboratories visit we had a lunch by 1:00 pm.

A total number of 85 students and Four guided faculty members Mr.G.Suresh, Associate .Professor,Mr.M.kalyanChakravarthy,Assistant.Professor,Ms.M.Ssuhasini,Asst.Professor,Ms.Y .Keerthi Asst.Professor, , Department t of ECE are participated in the visit.

Finally, with the kind cooperation of the students, the coordinators and the technical team of IIT, TIRUPATI, the visit went on successfully. We thank the management, Director sir, Principal Sir and our HOD Mr.U.Penchalaiah Sir for providing such an opportunity to visit IIT.TIRUPATI.

Impact analysis:

1. The students gain better practical exposure on projects and research activities carried by IIT, TIRUPATI.
2. After the Industrial Visit to IIT, TIRUPATI the students get motivated towards Placement Activities and research related projects.

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3rd Mile, Bombay Highway, Gangavaram (V), kovuru(M), Nellore Dt - 524137,A.P.
WWW.gist.edu.in

INDUSTRY VISIT
to
IIT TIRUPATI, ANDHRAPRADESH
for
B.Tech-II-Year-ECE Students 2023-2027 Batch
Organaised by
Department of Electronics And Communication Engineering
on
22-08-2024


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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Report on Industrial Visit to Gowri Software Solutions, Bangalore

The department of Electronics and Communication Engineering organized Industrial Visit for IV B. Tech ECE - B Students to " **Gowri Software Solutions, Bangalore**" from 03-09-2024 to 05-09-2024.

Gowri Software Solutions Limited is a leading information technology, QA Consulting Company. It is an independent Software testing and test automation company. Gowri Software Solutions started in the year 2017 and their test lab which is located in Bangalore, India, is equipped to provide high quality, cost effective quality assurance services to global Software development firms. Their Team Expertise in manual and automated testing for web, desktop, mobile, cloud, and cross-platform software solutions.

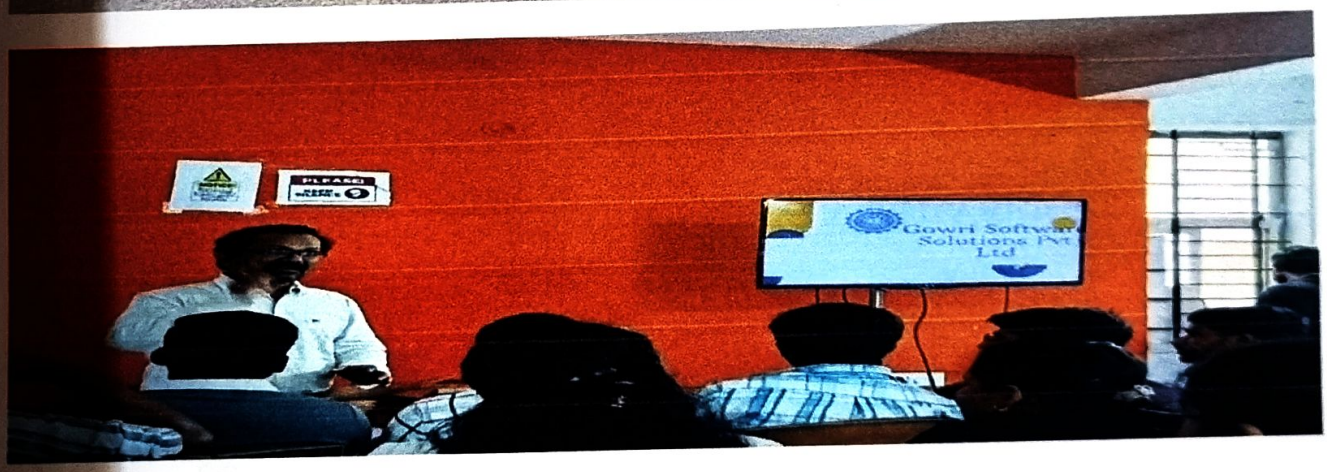
Gowri Software Solutions provides end-to-end quality assurance, testing and test automation services to Software development firms and those who are desirous of achieving high level of quality in their Software products and services. We are driven by the commitment to quality. Our methods and tools have evolved through sustained efforts and learning over a long period of our existence. By being selective in offering our services in Software quality assurance and testing, we are focused on expending our energies to achieve expertise in an area that is crucial to Software users and owners.

As a part of Industrial visit we arrived at **Gowri Software Solutions, Bangalore** at 9:30 am. The team has welcomed us with complementary Breakfast and the session was started by Mr. Prabhakar gaaru, CEO. He has given brief introduction about the establishment of company and he extends the future of software industry was in Software testing and full stack development.

A total number of 42 students and two guided faculty members Ms. G. Tejaswi, Asst. Professor, Mr. Sk. Arief, Asst. Professor, Department of ECE are participated in the visit.

Finally, with the kind cooperation of the students, the coordinators and the technical team of Gowri Software Solutions, the visit went successfully. This visit was successfully completed by visiting some tourist places around Bangalore, Mysore and Chikmangalore for the remaining two days.

In this regard, we thank the Management, Director Sir, Principal Sir and our HOD Mr. U. Penchalaiah Sir for providing such a wonderful opportunity to visit Gowri Software Solutions, through which the students gained knowledge in building their bright career.



Coordinator

HoD 9/9/19

Visit of Idea Factory

Report on Training: Design of Drone and 3D Printing

Venue: Idea Factory, Rajalakshmi Engineering College, Chennai.
Date: 8th October 2024

Participants:

- 31 students
- 4 faculty members

Introduction

A training program on "Design of Drone and 3D Printing" was successfully conducted at the Idea Factory, Rajalakshmi Engineering College, on 8th October 2024. The session aimed to provide participants with hands-on experience and theoretical insights into the rapidly evolving fields of drone design and 3D printing technology. The program was attended by 31 enthusiastic students and 4 faculty members from various departments.

Agenda of the Training

1. **Introduction to Drone Technology**
    - Basics of drones and their applications
    - Components and working principles
2. **Design and Fabrication of Drones**
    - CAD modeling and simulation
    - Assembly techniques and troubleshooting
3. **Introduction to 3D Printing**
    - Overview of 3D printing technology
    - Materials and methods
4. **Hands-on Session**
    - Designing drone components using 3D printing
    - Assembling a functional drone prototype
5. **Q&A and Feedback**

Highlights of the Event

- **Expert Sessions:** The program was led by industry experts and experienced faculty members who provided detailed guidance on drone and 3D printing technologies.
- **Interactive Learning:** Participants engaged in interactive discussions, fostering a deeper understanding of the concepts.
- **Hands-On Experience:** Practical sessions allowed students to design and create drone components using advanced 3D printing techniques.
- **Collaborative Environment:** Faculty and students worked together, encouraging teamwork and problem-solving.

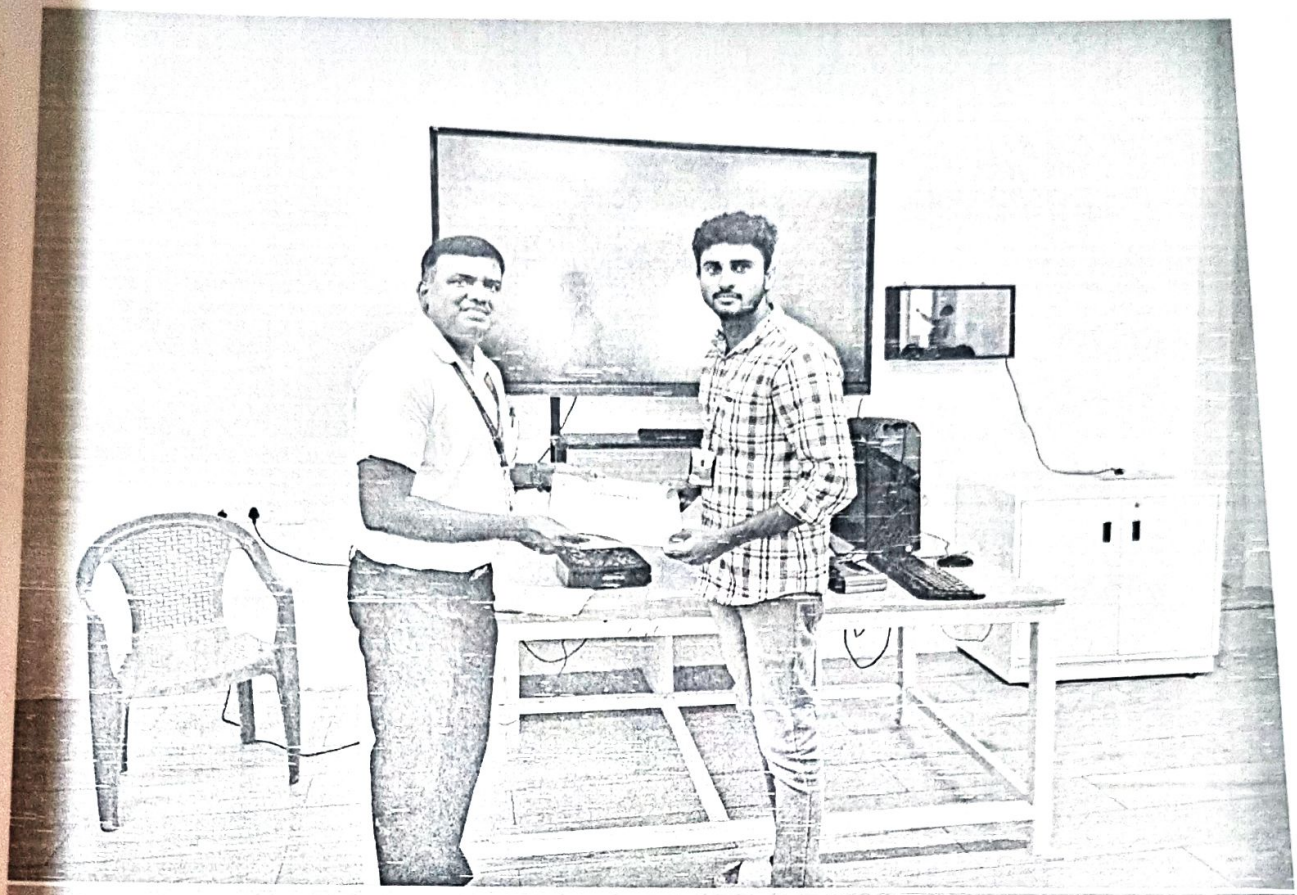
Outcomes

- Participants gained valuable knowledge about the fundamentals and applications of drone and 3D printing technologies.
- Students successfully designed and fabricated drone parts, enhancing their practical skills.
- Faculty members explored potential interdisciplinary research opportunities in these fields.
- The event fostered creativity and innovation among the participants.

Feedback and Conclusion

The training program received positive feedback from both students and faculty members. Participants appreciated the structured approach, expert guidance, and hands-on sessions that bridged theoretical knowledge with practical applications. The event concluded with a certificate distribution ceremony, recognizing the efforts and enthusiasm of all attendees.

The Idea Factory at Rajalakshmi Engineering College proved to be an excellent venue for such technical training programs, and it is anticipated that similar events will be organized in the future to keep participants updated on cutting-edge technologies.




IDEA FACTORY

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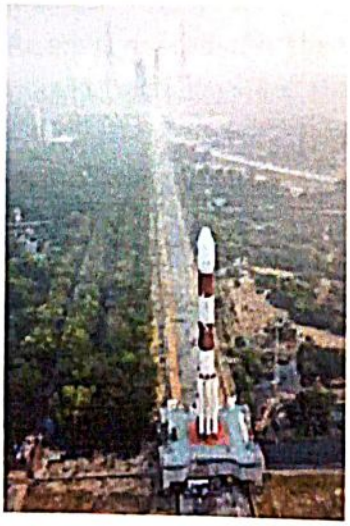
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Report on One Day Industrial Visit to SDSC-SHAR on 07-01-2025

An industrial visit to SDSC-SHAR (ISRO), Sriharikota has been organized by Department of Electronics and Communication Engineering of Geethanjali Institute of science and technology Gangavaram , for 109 students of B.Tech III year on 07- jan-2025 who were accompanied by four faculty members , Mr. CH.SURESH Asst.Prof., Mr. P.SUKUMAR Asst.Prof., Ms. V.BHARGAVI Asst. Prof., Ms. G.MOUNIKA Asst .Prof.,

ABOUT ISRO AND SDSC SHAR

ISRO is the primary space agency of India and one of the largest space research organizations in the world. SATISH DHAWAN SPACE CENTRE (SDSC) or SRIHARI KOTA HIGH ALTITUDE RANGE (SHAR) is a rocket launch centre operated by Indian space research organization (ISRO). Sriharikota island was chosen in 1969 for a satellite launching station. The centre became operational in Oct 1st 1971. It is located in Sriharikota in Andhra Pradesh. The Sriharikota range has been chosen for its proximity to the equator and to use the rotation of the earth. It is close to lake PULIKAT and it is about 100km north of Chennai and close to the BAY OF BENGAL.



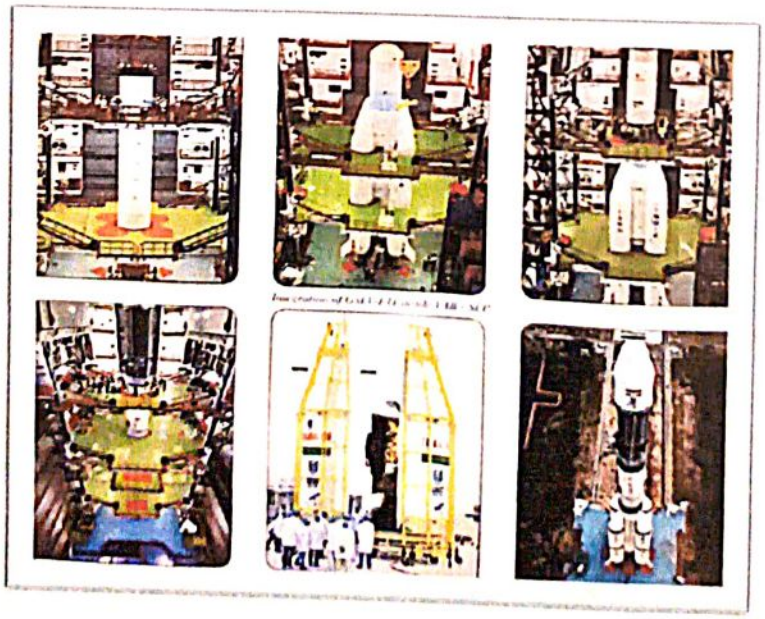
Summary of the Visit

Three buses with 109 students started from Geethanjali Institute of science and technology Gangavaram , at 5A.M on 07/01/2025.

And reached Sullurpet, a nearby town to ISRO at 7:30 A.M, on 7/01/2025. After Breakfast, we started to ISRO SDSC Centre and reached there by 09.45. A.M. After several security checks and administrative formalities, Students were taken to a central building. B.P Hall, with the help of Guide **Mr. K.MURTHY NAIK (Lib Asst)** In this place, they were shown a video – 'Gateway to Space' – on the ISRO, its history, and the current facilities available.

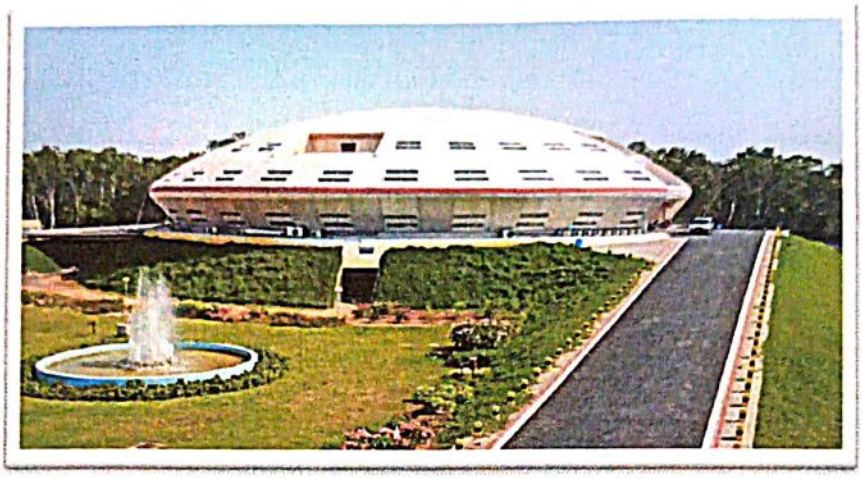
THE 'GATE WAY TO SPACE VIDEO'

The GSLV and PSLV are the two launch vehicles used currently by ISRO to launch satellites into the geosynchronous and polar orbits respectively. The GSLV has 3 stages – the first is a solid (fuel) stage, the second a liquid (fuel) stage and the third is a cryogenic stage. The satellites launched so far have applications such as National development/infrastructure, telecom,disasterwarnings,resourcemanagement,etcThe PSLV can launch multiple satellites Simultaneously at a low cost and high reliability. The various facilities at SDSC were listed and their functions are explained in brief.



MISSION CONTROL CENTRE(MCC)

The mission control is the focal point of controlling the vehicle. These computers are connected by Ethernet and fibre optics. There is a separate ring safety server which is controlled by a senior scientist.In case of abnormalities in the path of the rocket, this person can detonate the rocket so that the rocket is blown up over the sea and does not affect neighbouring human population.There are 45levels of information relating to the launch of the rocket. The vehicle Director authorises the launch at (t16) minutes. An automatic sequence program checks the health of the rocket (with respect to various parameters) and ensures that any deviations in the parameters are within specific limits.



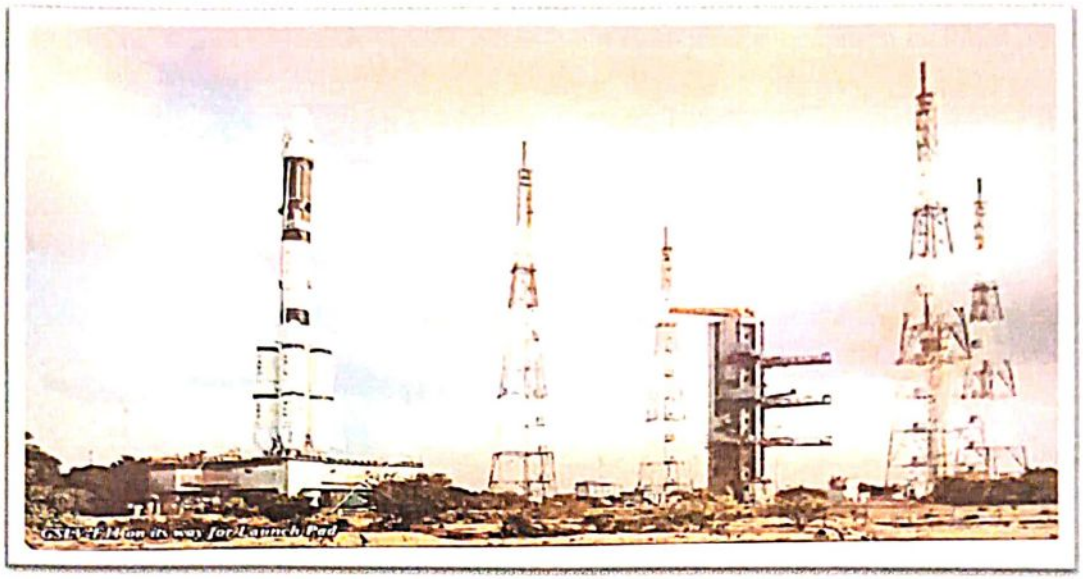
The vehicle position information is instantaneously computed in real time from the tracking data and is used for evaluating the performance of the vehicle.The performance data of various systems of the vehicle is acquired by telemetry ground stations.

The Mission Control Centre (MCC), situated about 6 km away from the launch complex, coordinates and conducts the launch operations during the countdown phase fill the injection of the satellite into orbit. Multi Object Tracking Radar(MOTR)is established with indigenous technology for tracking of the launch vehicles,spacecrafts inorbits,aircrafts and SpaceDebris.

SECOND LAUNCHPAD

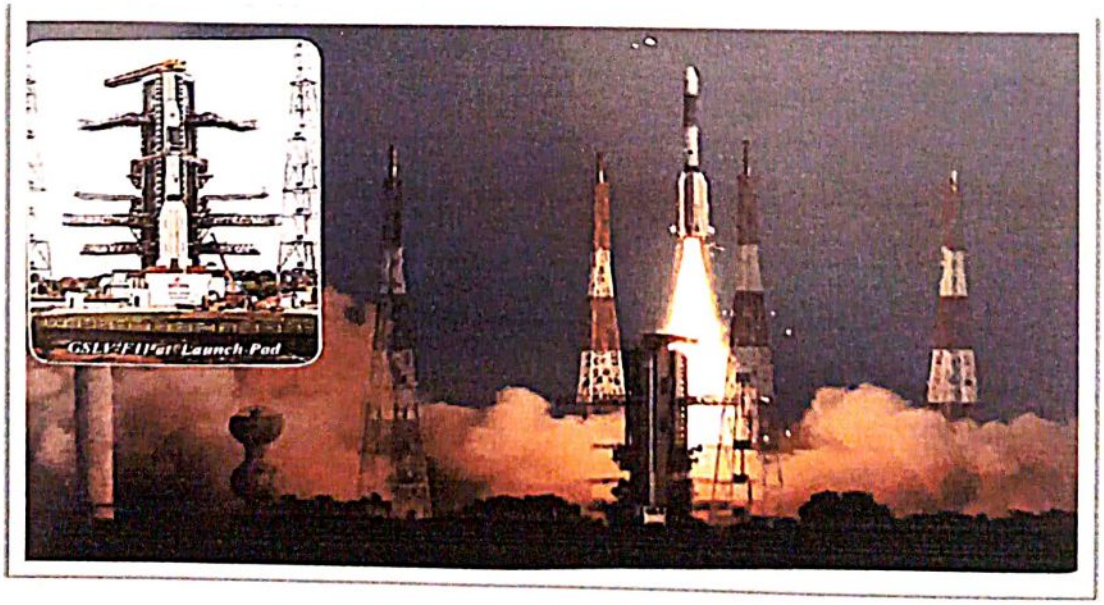
This is the location that we see every time a launch is broadcast on television. The rocket is assembled and brought to the launchpad.The rocket is electrically insulated from lightning by 4lightning protection towers.These towers also house high resolution cameras at several levels

To monitor the various stages of the rocket.These cameras are protected by concreteen closures. The launch pad itself is about 70mhigh.Thismeansthattheprotectiontowersareeven taller. An anchor is present to hold the rocket in place until the time of blast off. Separate pipe are present to deliver cryogenic fuels,which are supplied at 180 degrees Celsius.Finally,there are exhaust deflection ducts which deflect the exhaust gases through underground tunnels to a place which is a few tens of metres away. In case the flame returns to the rocket, balance will be lost and the rocket may topple.



The tunnels are filled with water to reduce pressure and temperature.Also,cryogenic fuel tanks are available in separate towers. Each floor in the launch pad is 4m high. This launchpad is called 'umbilical' due to the presence of the pipes which feed fuel to the rocket.

Second Launch Complex In order to provide additional facilities for launching operational PSLV's, GSLV's and also to have quick turn around time for launch, an additional launch pad with associated facilities was constructed. It was designed to accommodate, both the present PSLVs and GSLVs, and heavy launch vachile configuration GSLV-MKILL.This massive facility (52 m x 70 m x 96 m) is three times missions from SLP bigger than the present VAB at SLP.

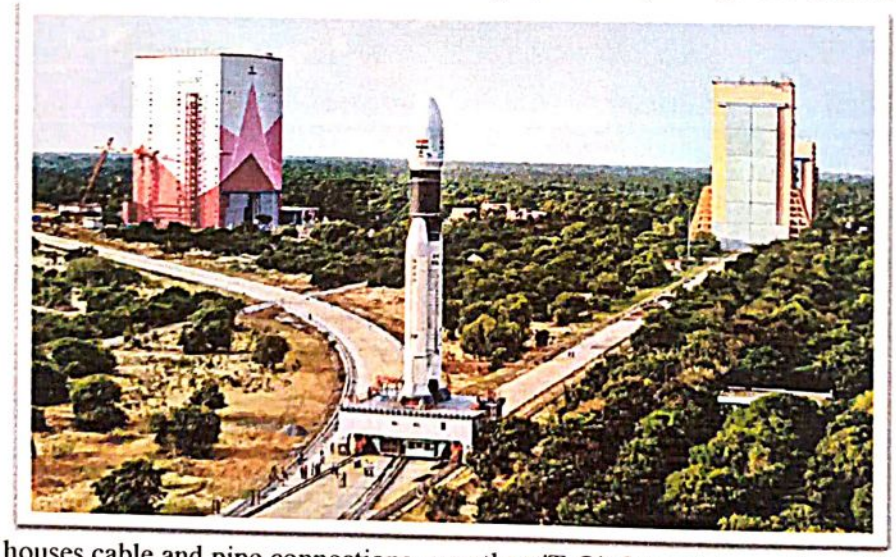


FIRSTLAUNCHPAD

Unlike the 'umbilical' type, this is a pedestal type. The whole tower moves away from the rocket just before the blast off. As there is a PSLV launch in the next month and that process was taking place at the time,entry was denied and we were allowed to see this from a distance. The first launch pad and its associated facilities were built in the late 1980s, primarily for the PSLV launch requirements .Later,they have been modified for the GSLV launch requirements. It was built on the concept of 'Integrate on the Pad', according to which, the individual stages of launch vehicle are brought from their preparation facilities, one after the other and integrated one over the other on the launch pad itself.

The Mobile Service Tower (MST) equipped with foldable and vertically repositionable access platforms facilitates the integration activity.The spacecraft,which is checked thoroughly and fuelled at its preparation facilities arrives at the launch pad and gets integrated with the launch vehicle. A few hours before the launch, the MSTis moved away fromlaunch pad on a rail track. Separate storage, transfer and servicing facilities areavailable for earth storable liquid propellants such as UH25 and N, O, and cryogenic propellants such as Liquid Oxygen and Liquid Hydrogen. These propellants are fed into the onboard tanks through fluid circuits. The filling operations, which are automated, are controlled and monitored from the Launch Control Centre (LCC), situated 6 km away from the launch pad.Afewhoursbeforethelaunch,theMST, which weighs about 3200 tons moves slowly to its parking place on 32 wheels, 8 nos. in each corner, on a twin rail track leaving the launch vehicle on the launch pedestal.

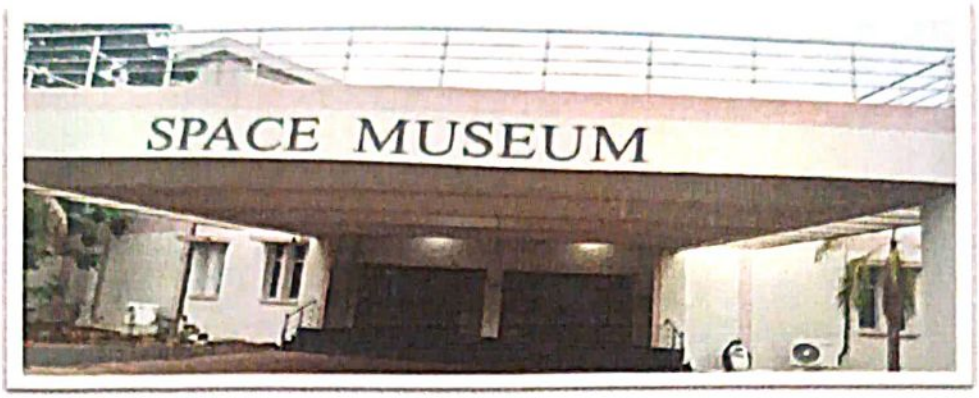
Following the final remote checkout and fuelling operations, through the Umbilical tower

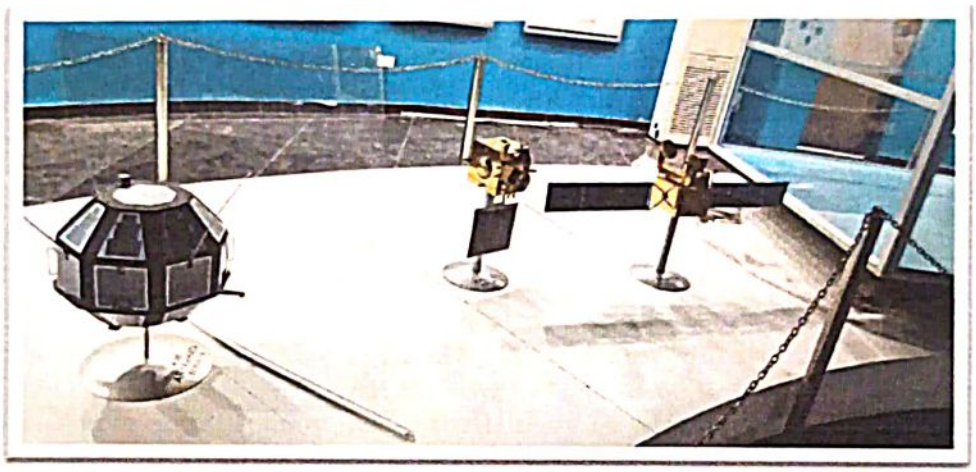


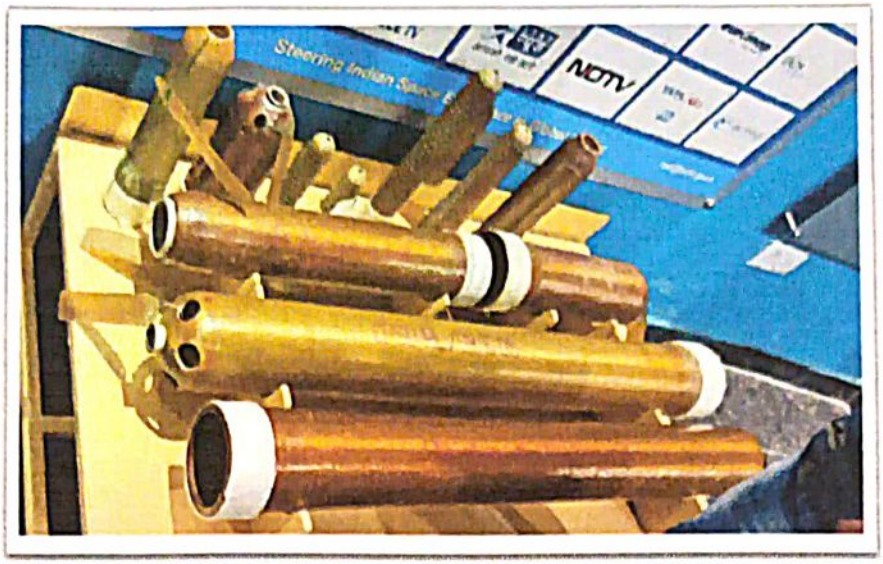
which houses cable and pipe connections ,exactly at'T-O'of count down the vehicle takes-off. As the National requirements of the number of launches are increased, Government of India approved the construction of Second Launch Pad (SLP) at SDSC SHAR. Now, FLP is also gettingfurtheraugmentedwithPSLVIntegrationFacility(PIF)inanotheroneyearwithwhich 12 to 15 PSLVs can be launched from the FLP itself. After the modifications carried out for PIF at FLP only the PSLVs can be launched from there and GSLVS can continue to fly from SLP.

SPACE MUSEUM

Space Museum provides a tell-tale account of the Indian Space Programme from its infancy. The story of the Indian Space Programme is unfurled in six sections, comprising of history, education, technology, applications, global and the future.







ASSEMBLY AND STATIC TEST AND EVALUATION COMPLEX

- Two buildings constitute the complex–the assembly building and the test buildings which are placed adjacent to each other. Motors which are in excess of 2m diameter are present and they are fabricated in Mumbai.

- At around 1.45. P.M., we had lunch at ARYABHATTA canteen facility at SHAR. After having our Lunch, at around 4.30 P.M.

- We also visit SLV and PSLV and SRC (sound) and we finally visited the Space Museum and the Library facility at SHAR.Here,we were allowed to take the Photographs,wherewe got an opportunity to know about the History of SHAR with the aid of many models related to the centre.

- Ataround5.30 P.M.in the Evening, the visit was concluded and the students has started to return to Nellore.

PSLV C46 on Pad

PSLV C46 Lift off

PS3 & PS4 integration

Heatshield assembly at MST

Withdrawal of MST

Integration of PSLV C46 at MST - First Launch Pad

SOME PHOTOGRAPHS DURING THE VISIT