



G H Patel College of Engineering & Technology, V. V Nagar



Department of Civil Engineering

Report on

Visit to “ISRO-Ahmedabad and ISR-Gandhinagar”

Department of Civil Engineering, GCET had organized one day (04/10/2019) Industrial/Educational visit to “ISRO-Ahmedabad and ISR-Gandhinagar”. 51 students (3rd year) along with 2 faculty member (Prof. Anand Darji and Prof. Jalpa patel) visited the institutes.

Aim of Visit:

The main aim of visit is to make students aware about the GIS (Geographic information system) RS (remote sensing), GPS (Global Positioning System), space technology and its applications and to understand the appropriate soil investigation/testing technique/method and get true sub soil parameters used for selection of type of foundation.

About ISRO AND ISR:

Indian Space Research Organization (ISRO), formed in 1969, superseded the erstwhile INCOSPAR. Vikram Sarabhai, having identified the role and importance of space technology in a Nation's development, provided ISRO the necessary direction to function as an agent of development. ISRO then embarked on its mission to provide the Nation space based services and to develop the technologies to achieve the same independently. Throughout the years, ISRO has upheld its mission of bringing space to the service of the common man, to the service of the Nation. In the process, it has become one of the six largest space agencies in the world. ISRO maintains one of the largest fleet of communication satellites (INSAT) and remote sensing (IRS) satellites, that cater to the ever growing demand for fast and reliable communication and earth observation respectively.

The Institute of Seismological Research (ISR) under the Science and Technology Department, Government of Gujarat is functioning from 2006. ISR is the only institute in India fully dedicated to seismological research and is planned to be developed into a premier international institute in few years.

About Visit:

First they were taken to ISR (Indian Seismological Research Centre)

There are three departments Geotechnical engineering, geophysics and OSL. In Geophysics they study about different patterns of seismic waves and related studies of Earthquake. Here they learned how to monitor earthquake. Earthquake is one of the natural disaster occurred due to movement of tectonic plates under the earth surface. Basically seismology is the study of earthquake. The students were taught about types of Earthquake i.e. Interplate and intraplate earthquake. In India, mostly all the earthquake are recorded as intraplate earthquake. In Interplate earthquake, earthquake is due movement between two different plates while intraplate earthquake is due to the movement of single plate, mostly the load on the single plate increases due to which the plate gets break and a large energy in the form of earthquake is released. The point of origin of Earthquake under the earth surface is Focus while the point on the surface of earth exactly above focus is known as Epicenter. Then student were taught about how they study the past earthquakes.

In OSL Laboratory they study and collect different past data regarding to Earthquakes and Tsunamis. In Geotechnical they study about different rocks and their formations beneath the Earth surface and they also use the software named ROCKWRK for digital analysis.

Then after students were taken to ISRO (Indian Space Research Organization).

There they were celebrating World Space Week. Information about the space achievements in Indian was given. They have explained in detail, how the ISRO is formed and how it is working to explore space and technologies. They have also explained us about their launch vehicle GSLV MK 3. About the boosters, fuel capacity trajectory it follows. Further they have given the brief idea about their upcoming space missions as well as their own GPS Satellite.

Information about how the space rocket works, its parts, what type of fuels are used, etc. The students were shown the exhibition where models of space rockets, space stations, satellites etc. Recently Indian Space researchers are working for the Mission Gaganyaan. A Brief information about the parts of rocket was also explained. And a video of how astronauts live in space was also shown.