



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



**Department of Civil Engineering**

**Report on**

**Visit to “ISRO Ahmedabad, BISAG and ISR, Gandhinagar”**

Department of Civil Engineering, GCET had organized one day (04/10/2018) Industrial/Educational visit to “ISRO Ahmedabad, BISAG and ISR Gandhinagar”. 38 students (4<sup>th</sup> year) along with 2 faculty member (Prof. Riddhi vashi and Prof. Anand Darji) 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, BISAG 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Indian Space Research Organization (ISRO), formed in 1969, superseded the erstwhile INCOSPAR.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.

Bhaskaracharya Institute For Space Applications And Geo-Informatics (BISAG), formerly known as Remote Sensing and Communication Centre (RESECO), has been renamed after the great Indian Mathematician of the 12th century, "Bhaskaracharya" BISAG is a State level nodal agency to facilitate the use of spatial and geo-spatial technologies for the planning and developmental activities pertaining to Agriculture, Land and Water Resource Management, Wasteland/Watershed Development, Forestry, Disaster Management, Infrastructure and

Education. The Institute started its operations in April 1997 and was renamed as "Bhaskaracharya Institute for Space Applications and Geo-informatics" in December 2003.

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 BISAG - Bhaskaracharya Institute for Space Application and Geoinformatics. In that they have shown how they use remote sensing, GPS, GIS practically. They have their own channels which are telecasted in many villages of India. Educational channels, news channels, etc. have been useful for many villages.

Next students were taken to ISR (Indian Seismological Research Centre)

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.

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. 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.