

## Application of Rock Mechanics in High Rise Constructions

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**Department of Civil Engineering, MVJCE**, organized a Guest Lecture on ‘Application of Rock Mechanics in High Rise Constructions’, for the Second year **BE** students, in Seminar Hall No. 06, on 01/09/2018, at 9.30 am.

The Speaker for the lecture was **Mrs. Praveena Das Jennifer**, who is currently Scientist C, working in Environmental and Exploration Geophysics Department (EEGD), and associated with S&T Project - ‘**Seismic monitoring in old mining areas and Structural Monitoring of surface structures in urban areas**’.

**Prof. Vetrivel N**, Assistant Professor, Department of Civil Engineering, introduced the Speaker and the topic of the lecture, to the students.

### **Summary of Presentation:**

Rock Engineering is a discipline which mostly deals with design of structures built in/on rocks. These structures encompass building foundations, dams, slopes, shafts, tunnels, caverns etc. The subject of Rock Mechanics systematically explains the basic principles behind Rock Engineering, principles which remain the same, even though the projects may be different. The earth crust and underlying rigid mantle make the lithosphere, consisting of a variety of minerals and rocks, including oil and gas. More than 80% of all raw materials that are used in various sectors of economy, society and environment are of mineral origin. Their uses are in major

construction projects like roads, railway tracks, airports, tunnels, canals, dam sites, high rise buildings, industrial settlements, agriculture and many more..

Sub topics discussed were:

- Introduction to Rock Mechanics
- Importance of Rock Mechanics
- Factors influencing the types of foundation
- Types of shallow foundations
- Deep foundations
- Geophysical Methods
- Excavation
- Basic seismic monitoring
- Methodology for strata classification
- Why structural health monitoring?
- Case studies



**Mrs. Praveena Das Jennifer (Scientist , NIRM) delivering guest lecture on "Application of rock mechanics in the construction of high raised building" to 3<sup>rd</sup> semester students of Civil Engineering department on 01/09/2018 at seminar hall:4**



**Chief Guest (Mrs Praveena Das Jennifer) receiving token of appreciation from Prof. Muralidhara R for delivering guest lecture to third semester Civil Engineering students on 01/09/2018**

### **Outcome of the Event:**

The lecture of the Chief Guest was motivational, illustrating every aspect in a very simple and effective way. The lecture was very useful in understanding the different types of foundation. The students also comprehended the significance of Rocks Mechanics, and how it is useful in the construction of highrise buildings.