Objectives

In this section you will learn the following

- Ground Improvement Techniques
Ground Improvement Technique

The following methodologies are used for the stabilization of soil:

1. **Mechanical stabilization:**
   - Method of compaction, both static and dynamic, based on soil and structure built on it.
   - Preloading: To reduce future settlements, consolidation is increased by this method thereby leading to improved shear strength of soil.
   - Facilitate the drainage properties: To drain out water, which reduces shear strength by building stone columns or sand columns.
   - Add cohesionless soils to cohesive soils, thereby making soil well graded leading to increased strength.

2. **Chemical stabilization:**
   - For cohesionless soils we use cement as stabilizing agent and for cohesive soils we use lime stabilization.
   - Grouting: formation of slurry by adding different chemicals or additives. Eg. Water + cement + lime +additives.
   - Use of Geotextiles, Geosynthetics, etc.

3. **Thermal stabilization:**
   - In this method, the soil is stabilized by heating or cooling (freezing).
Recap

In this section you have learnt the following.

- Ground Improvement Techniques