

ENVIRONMENTAL GEOTECHNOLOGY

Module I

Soil, Complexity of soil nature, formation, regional deposits, solid-water-air relationships and Index properties.

Module II

Classification of soil, soil structure and clay minerals, soil compaction, effective stress, capillarity and permeability, seepage through soils, flownets, drainage and dewatering, compressibility of soil and consolidation, shear strength of soils.

Module III

Geotechnical applications in slope stability, factor of safety. Site investigation and subsoil exploration.

Module IV

Application of soil mechanics in environmental engineering, land reclamation, soil erosion and control. Application of Geotextiles.

Books & References:

1. Environmental Geotechniques, Robert Sarsby, Thomas Telford Books.
2. The Nature and Properties of Soil, Nyle C Brady, Eurasian Publishing House (P) Ltd.
3. Basic and Applied Soil Mechanics II Edition, Gopal Ranjan & A.S.R Rao, New Age Publishers.
4. Geotechnical Engineering, S.K.Gulhati, Manoj K Dutta, McGraw Hill Co.