**NAME:** Harrison James

**MATRIC NUMBER**: 17/ENG03/024

**DEPARTMENT**: Civil Engineering

**COURSE NAME:** Soil Mechanics

**COURSE NAME:** CVE (306)

1. **TYPES OF SOILS AND THEIR PERMEABILITY VALUES**

|  |  |
| --- | --- |
| **TYPE OF SOIL** | **PERMEABILITY VALUE** |
| Fine sand  | 0.01 to 0.001 |
| Coarse sand | 1.0 to 0.01 |
| Clean gravel | 100 to 1.0 |
| Clay loam | 0.8 |
| Delhi silt | 0.0000006 |
| Sandy Loam | 2.5 |

1. **RELEVANCE OF SOIL PERMEABILITY IN SOIL ENGINEERING**

**Permeability** of soil can be defined as a soil property which permits the flow of water. It can also be defined as the property of a porous material which allows the seepage of water into its interconnecting voids. Some of the important roles which make soil permeability relevant in soil engineering include:

* Soil permeability is applicable in the determination of the rate of settlement of a saturated compressible soil layer.
* The design of earth dams is very much based upon the permeability of soil used.
* Soil permeability helps in the calculation of seepage through the body of earth dams and stability of slopes for highways.
* Soil permeability plays a key role in the design of retaining walls.
* The stability of slopes as well as retaining structures are greatly affected by the permeability of the soil involved.
* Permeability influences the rate of settlement of a saturated soil under load.
* Filters made of soils are designed based upon their permeability.