**SIMON BOLIYEH DION**

**17/ENG03/051**

**CVE 306: SOIL MECHANICS**

QUESTION ONE:

MENTION 7 TYPES OF SOILS AND THEIR PERMEABILITY VALUES

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| **TYPE OF SOIL** | **PERMEABILITY VALUE** |
| Clean gravel | 100 to 1.0 |
| Coarse sand | 1.0 to 0.01 |
| Fine sand  | 0.01 to 0.001 |
| Silt  | 0.001 to 0.00001 |
| Clay  | Less than 0.000001 |
| Delhi silt | 0.0000006 |
| Boston blue clay | 0.000000007 |

QUESTION TWO:

EXPLAIN THE RELEVANCE OF SOIL PERMEABILITY IN SOIL ENGINEERING

**Permeability** is the measurement of the soil’s ability to allow water to flow through its pores or voids. The relevance of soil permeability in soil engineering includes:

1. Soil permeability is applicable in the determination of the rate of settlement of a saturated compressible soil layer.
2. Soil permeability helps in the calculation of seepage through the body of earth dams and stability of slopes for highways.
3. Soil permeability is necessary in the calculation of uplift pressure under hydraulic structure and their safety against piping.
4. Soil permeability is necessary in the design of filters made of soils.
5. Soil permeability plays a key role in the design of retaining walls.