**DUNMOYE AKEEM O.**

**17/ENG03/016**

1. **MENTION 7 TYPES OF SOILS AND THEIR PERMEABILITY VALUES**

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| |  |  |  | | --- | --- | --- | | **Soil** | **Texture** | **Permeability** | | Clayey soils | Fine | From very slow to very rapid | | Loamy soils | Moderately fine | | Moderately coarse | | Sandy soils | Coarse | |

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| **Example** **Average permeability for different soil textures in cm/hour**   |  |  | | --- | --- | | ***Sand*** | ***5.0*** | | ***Sandy loam*** | ***2.5*** | | ***Loam*** | ***1.3*** | | ***Clay loam*** | ***0.8*** | | ***Silty clay*** | ***0.25*** | | ***Clay*** | ***0.05*** | |

1. **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:

* Soil permeability is applicable in the determination of the rate of settlement of a saturated compressible soil layer.
* Soil permeability helps in the calculation of seepage through the body of earth dams and stability of slopes for highways.
* Soil permeability is necessary in the calculation of uplift pressure under hydraulic structure and their safety against piping.
* Soil permeability is necessary in the design of filters made of soils.
* Soil permeability plays a key role in the design of retaining walls.
* The more permeable the soil, the greater the seepage. Some soil is so permeable and seepage so great that it is not possible to build a pond without special construction techniques.