**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**

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| --- | --- |
| ***Sand*** | ***5.0*** |
| ***Sandy loam*** | ***2.5*** |
| ***Loam*** | ***1.3*** |
| ***Clay loam*** | ***0.8*** |
| ***Silty clay*** | ***0.25*** |
| ***Clay*** | ***0.05*** |

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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.