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**CIVIL ENGINEERING**

**17/ENG03/038**

1. *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 |

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