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School of University Polytechnic

Diploma in Civil Engineering
Mid Term Examination - May 2024

Duration : 90 Minutes
Max Marks : 50

Sem IV - N1DB404B - Soil Mechanics and Foundation EngineeringGeneral Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) Discuss the classification of soils based on particle size K2 (2)
- 2) Define void ratio and porosity. K1 (3)
- 3) Express the term: alluvial soil, glacial soil, residual soil. K2 (4)
- 4) Describe the origin and uses of different soil types. K2 (6)
- 5) Illustrate seepage velocity K3 (6)
- 6) Illustrate the laboratory methods for determining the moisture content K3 (9)
- 7) Outline dry, unsaturated and saturated soil with phase diagram. K4 (8)

- 8) Focus on Darcy's law in terms of the hydraulic gradient, permeability, and cross-sectional area K4 (12)

OR

- Break down the impact of soil properties, such as porosity and grain size distribution, on permeability K4 (12)