Higher Technological Institute
Civil Engineering Department
Principles of Irrigation and Drainage CIV 155
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Assignment 2

1- If the water content of a certain saturated soil sample is 22 percent and the specific gravity is 2.65, determine the saturated unit weight γ_{sat}, dry unit weight γ_d, porosity *n* and void ratio *e*.

2- A moist clay sample weighs 0.55 N. Its volume is 35 cm^3. After drying in an oven for 24 hours, it weights 0.50 N. Assuming specific gravity of clay as 2.65, compute the porosity *n*, degree of saturation *S*, original moist unit weight, and dry unit weight.

3- A moist soil sample has a volume of 484 cm3 in the natural state and a weight of 7.94N. The dry weight of the soil is 7.36 N and the relative density of the soil particles is 2.65. Determine the porosity, soil moisture content, volumetric moisture content, and degree of saturation.