



## Assignment # 2 Rekayasa Pondasi I

### Shallow Foundation

(duration of task : 1 weeks)

Lecture : Sherly Meiwa ST., MT

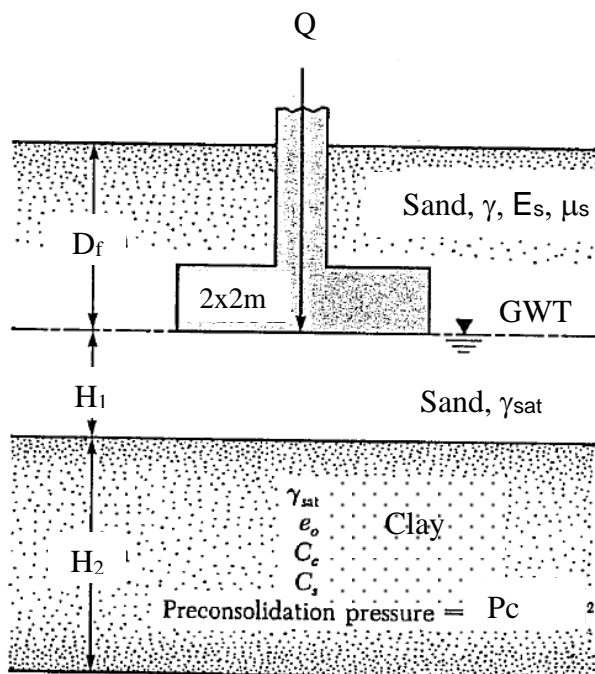
Note :

YOU ARE REQUESTED to complete this task and make a report. Assignments can be handwritten or typed but must be in pdf format.

**TASK 4** (PROBLEM NO 5) due dates 27 October 2020

### TASK 4

#### Problem No 5



A Foundation 2 x 2 m in plan is shown in figure.

$D_f = 1.4, 1.5, 1.6 \text{ m}$

$H_1 = 1.0, 1.1, 1.2 \text{ m}$

$H_2 = 2.4, 2.5, 2.6 \text{ m}$

$Q = 850, 900, 950 \text{ kN}$

#### Sand Parameters

$\gamma_{\text{sand}} = 15.7, 16, 16.3 \text{ kN/m}^3$

$\gamma_{\text{sat sand}} = 18.9, 19.0, 19.2 \text{ kN/m}^3$

$E_s = 10000, 11000, 12000 \text{ kN/m}^2$

$\mu_s = 0.3, 0.33$

#### Clay Parameters

$\gamma_{\text{sat clay}} = 19.0, 19.1, 19.2 \text{ kN/m}^3$

$e_o = 0.68$

$C_c = 0.25$

$C_s = 0.06$

$P_c = 90, 100, 110 \text{ kN/m}^2$

- Estimate the immediate settlement.
- Estimate the consolidation settlement.
- Estimate the total settlement of the foundation.