CWR 5125 – GROUNDWATER HYDROLOGY
HOMEWORK No. 5 – Fall 2023
Instructor: Professor Fuentes

Required homework is graded over 100 and all problems have same value. Students are all encouraged to timely discuss their approach and solution with the instructor.

Required Problems:

A. (30 points). In reference to Section 3.6, "Slug Tests", study and compare the three most widely used slug tests. Select the one with the simplest equation and methodology and briefly explain how you would use it *to determine aquifer parameters*.

B. (40 points). In reference to the content of Section 3.7, "Well Tests", solve Problem 3.71. (p. 176).

C. (30 points). In reference to the article *"Impact of Sea-Level Rise on Sea Water Intrusion in Coastal Aquifers" by A. D. Werner and C. T. Simmons, Ground Water 47, No.2, pp. 197-204*. Explain the way that the fundamental analytical equations that are developed in the paper were used to estimate the *sea water wedge toe,* $\Delta_{XT,}$ as function of sea level rise and the other four parameters (as shown in all the figures in the paper).

(Due Date: Thursday, November 2, 2023, PDF via email,
but original presented in lectures on Tuesday, November 7, 2023)

Study Assignment: Modules 3 and 4 (Refer to syllabus for details)

Exam No. 2: Tuesday, November 7, 2023