

INTRODUCTION TO COASTAL HYDRAULICS

HOMEWORK 2B

In assignments, X is the last digit of the student number and Y is the penultimate digit. In the assignments, the student number must be written and X =? and Y =? must be indicated in every solution.

Question

A wave with a period of $8.Y$ s and a height of $4.X$ m propagates toward the shore from deep water. The wave crests in deep water are oriented at an angle of $4X^\circ$ with the shoreline. Specific weight of the sea water is 10.20 kN/m^3 and the bottom slope is $1/3Y$.

Determine the deep water conditions and perform the shoaling calculations using GODA method. In these calculations, write the shoaling expressions and make the calculation by explaining the significant and maximum wave heights at -10m and then determine the significant and maximum wave heights for all depths with the help of "excel". Draw the change of wave heights with depth.