

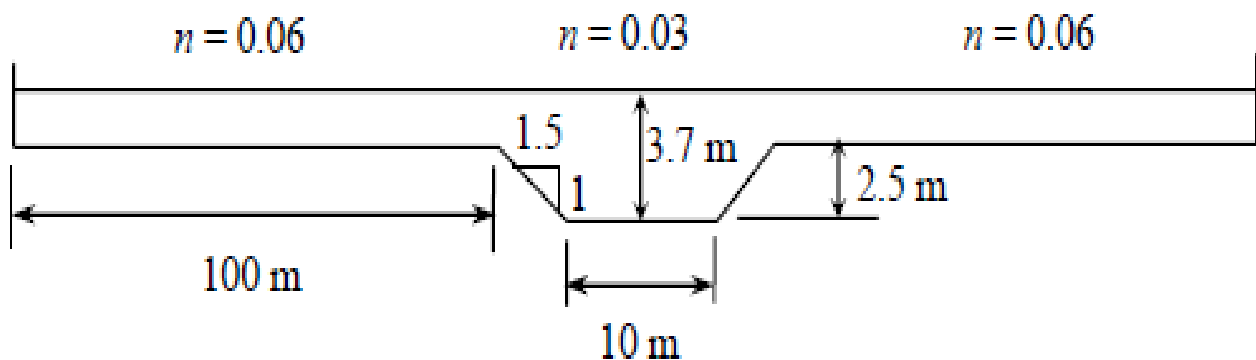
## EAH 225 HYDRAULICS –Open Channel Hydraulics Assignment 2

Due Date: 23<sup>rd</sup> March 2010 (TUESDAY)

1. Determine the normal depth and critical depth in a trapezoidal channel with a bottom width of 12 m, side slopes of 1:3, and a bed slope of 0.002. The Manning's  $n$  value is 0.025 and the discharge is  $85 \text{ m}^3/\text{s}$ .

(20 Marks)

2. A compound channel has symmetric floodplains, each of which is 100 m wide with Manning's  $n = 0.06$ , and a main channel, which is trapezoidal with a bottom width of 10 m, side slopes of 1:1.5, a bank-full depth of 2.5 m, and a Manning's  $n$  of 0.03. If the channel slope is 0.001 and the total depth is 3.7 m, compute the uniform flow discharge.



(20 Marks)