Question 1 :

Raw water with 2g O_2/m^3 and a temperature of 10^0C is passed over a straight weir of a height of 0,65m. Estimate the downstream oxygen content.

For unpolluted water: $\qquad @ 10^0C \rightarrow C_S = 11.3g/m^3$

K=0.45(1+0.046T)h

Question 2 :

Determine the number of steps of a cascade to achieve maximum oxygenation , assuming an available head of 1.5m , an efficiency coefficient K depending on the weir height h as stated by Fig 3.1 given below
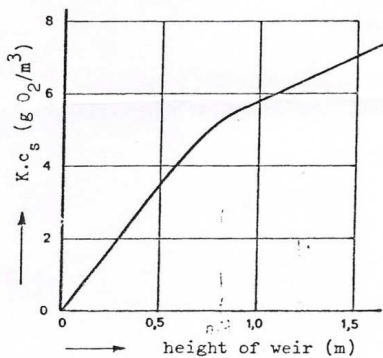
$$C_S = 10g/m^3 \quad C_0 = 2g/m^3$$

Fig. 3.1 EFFICIENCY COEFFICIENT IN DEPENDENCE OF THE HEIGHT OF FALL OVER WEIRS