Uva Wellassa University
Faculty of Animal Science & Export Agriculture

BSc in Tea Technology and Value addition

Uva Wellassa University

End Semester Examination February/ March 2012
Year III Semester I

Instrumentation in Agricultural Research (TEA 341-0)
& Repeat (TEA 342-0)

Instructions

Answer **all** questions
No. of questions : One (01)
No. of page/s : One (01)
Time : 30 minutes
Total marks allocated : 60%

Index No: .....

Part II: Essay

(1) a.Explain why conductivity is an important water quality parameter.

b. Define "conductivity" (K) and identify the respective units of K.

c. When the concentration of an ionic solution is C, Molar conductivity of the solution is given by $\Lambda = K/C$. Molar conductivity of 0.100 mol dm^{-3} aqueous KCl solution at 298 K is 129 S cm^2 mol^{-1}. The measured resistance of the cell in this solution is 28.44 Ω. When he same cell is filled with 0.050 mol dm^{-3} aqueous solution of HCl , the resistance is 31,6 Ω.

i) Calculate the cell constant of the above conductivity cell.
ii) What would be the conductivity and molar conductivity of HCl at that temperature and concentration?

(100 marks)