

# 東吳大學 107 學年度暑假轉學生招生考試試題

第 1 頁，共 1 頁

系級	化學系三年級	考試時間	100 分鐘
科目	分析化學	本科總分	100分

**1. An electrochemical cell:  $\text{Pb} \mid \text{Pb}^{2+} (0.10\text{M}) \parallel \text{Cd}^{2+} (0.05\text{M}) \mid \text{Cd}$**   
 $\text{Pb}^{2+} \mid \text{Pb}, E^0 = -0.15\text{V}; \text{Cd}^{2+} \mid \text{Cd}, E^0 = -0.40\text{V}$

- (a) Write the half-cell reaction of cathode?(5pts)
- (b) White the half-cell reaction of anode?(5pts)
- (c) Write the reaction of electrochemical cell? (5pts)
- (d) Calculate the cell potential?(5pts)
- (e) Is it an electrolytic or Galvanic cell? (5pts)

**2. Describe the operational theory of glass membrane electrode. (25 pt)**

**3. Describe the theory of flame photometric detector and its application. (25 pt)**

**4. Describe the theory and application of ion pair chromatography. (25 pts)**