

所別：法國語文學系碩士班 不分組 科目：語言學概論

污水工程：

1. 試詳細說明化學混凝沈澱處理程序之主要功能目的、運轉原理與機制、操作參數與其範圍、以及常見之操作異常現象與原因。(15%)
2. 試說明與比較放流水濃度管制與總量管制之定義、意義與優缺點。(15%)
3. 試以擁有約一萬名學生的中央大學為對象，推估其每日所產生的污水水質與水量，並規劃一個可有效處理與解決這些污水的污水處理系統架構。請逐一針對所選用的處理程序與單元，簡要說明其設置目的及其對 BOD 與 SS 兩種污染物之設定去除率。(20%)

給水工程：

4. A water treatment plant has four clarifiers treating 15,120 CMD of water. Each clarifier is 5 m wide, 24 m long, and 4.5 m deep. Determine: (a) the detention time, (b) overflow rate, (c) horizontal velocity, and (d) weir loading rate assuming the weir length is 2.5 times the basin width. (10%)
5. Explain how to conduct a jar test to obtain an optimum coagulant dose. (8%)
6. Define and explain the following terms: (32%)
 - (1) Disinfection
 - (2) Rapid Sand Filtration
 - (3) Colloidal Destabilization
 - (4) Ion-Exchange Softening
 - (5) Water Supply System
 - (6) Eutrophication
 - (7) Total Trihalomethanes
 - (8) Fire Demand