中國文化大學 103 學年度碩士班考試入學招生考試

系所組：化學系應用化學碩士班

日期節次：103 年 3 月 15 日第 1 節 9:00~10:30

科目：有機化學與分析化學

一、分析化學(50 分)

1. A compound had a molar absorptivity of $3.03*10^3$ Lcm^{-1}. What concentration of the compound would be required to produce a solution that has a transmittance of 9.53 % in a 2.5 cm cell? (10 分)
2. 說明為何 UV 光譜的訊號是呈寬帶(band)? (10 分)
3. 請說明 O_2 的何種性質會影響螢光特性? (10 分)
4. 請比較火焰式及非火焰式原子吸收光譜儀的優缺點。(10 分)
5. What is reversed-phase HPLC separation? (10 分)

二、**Define the following terms : 5 points each （50分）**

(1) Organic Chemistry

(2) Lewis acid and Lewis base

(3) Nucleophilic 1,2-Shifts

(4) Covalent bond and Polar covalent bond

(5) Markovnikov's rule

(6) Aromatic Compounds

(7) E_2

(8) S_N2

(9) Conformational isomers

(10) Zaitsev's Rules