國立臺北科技大學 112 學年度碩士班招生考試

系所組別：3210 環境工程與管理研究所甲組

第一節　環境工程　試題

注意事項：

1. 本試題共 5 題，每題 20 分，共 100 分。
2. 不必抄題，作答時請將試題題號及答案依照順序寫在答案卷上。
3. 全部答案均須在答案卷之答案欄內作答，否則不予計分。

1. Please explain the following terms for their meanings and application (1) Crown corrosion (2) Flue gas desulfurization (3) Anoxic decomposition (4) Velocity gradient (20 points, 5 points each)

2. $AlPO_4$ is insoluble with a solubility constant of 10^{-22}. How many mg/L of PO_4^{3-} would be in solution at equilibrium with $AlPO_4$? (Al=27, P=31, O=16) (20 points)

3. What are perfluoroalkyl and polyfluoroalkyl substances (PFAS) (10 points)? Where are they from(5 points)? What are their environmental impacts(5 points)? (20 points total)

4. Please describe the technologies for stationary source NOx control. (20 points)

5. Please describe the theory of "breakpoint chlorination" and calculate the how many gram of chlorine is required to oxidize 1 gram of ammonia to nitrogen gas. (20 points)