

國立臺北科技大學

九十三年學年度環境規劃與管理研究所碩士在職專班入學考試

環境學(以環境工程與環境科學兩大部分為主) 試題

填准考證號碼

第一頁 共一頁

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注意事項：

1. 本試題共【五】題，每題配分 20 分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在試卷答案欄內，否則不予計分。

1. 試解釋何謂 TSP, PM₁₀, 與 DF? 並說明其間之關聯性為何? 另何者會「直接」影響空品指標的 PSI 值?
2. 試輔以流程圖說明我國環境整體廢棄物清理作業流程之概況?
3. 就我國現行的永續發展策略而言, 試申論環境管理 (Environmental Management) 應從哪些課題著手 (即有哪些課題?), 如何著手 (如策略等)?
4. 試述廢污水去除 SS 時所用的空氣浮除 (選) 法處理之原理或機構?
5. 試就下列短文內容, 以約 200 字的中文說明其原意?

Incineration of sewage sludge doped with several heavy metals was studied at small pilot plant scale in a bubbling fluidized bed of 15 cm i.d. and 5.2 m height. Some ceramic and metallic filters were tested at a relatively high temperature (600–700°C) to check their usefulness for partitioning of heavy metals in the flue gas. The work was focused on the fate of six selected heavy metals (Cr, Cd, Ni, Zn, Cu, Pb). In this process, there were four exit flows or discharges for these metals: bottom ash, coarse fly ash, cake filter or fine fly ash and flue exit gas. The distribution or partitioning of each heavy metal (HM) among these four exit flows was studied. Only cadmium and sometimes lead showed any difference between the different HMs considered. All other HMs seems to have the same fate, distribution or partitioning. Such distribution is governed or ruled by the fluid dynamics in the incinerator, cyclone and ceramic filter. Most of the HMs do not have enough residence time in this incinerator type to diffuse out of the ash particle and so remain in the particle. The amount of each HM in each exit flow in this process is governed by fluid dynamics and kinetics and not at all by thermodynamics. © 2000 Elsevier Science B.V. All rights reserved.