

CEP
EP02
國立臺北科技大學 108 學年度碩士班招生考試

系所組別：3220 環境工程與管理研究所乙組

第一節 環境科學 試題

第一頁 共一頁

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。

- 一、 Please explain these terms (各5分，共20分)
 - (1) Median lethal dose (LD 50)
 - (2) First law of thermodynamics
 - (3) Global warming potential
 - (4) Ecological footprint
- 二、 Please describe the nitrogen cycle in the biosphere. You can draw a figure to explain if you want. (20分)
- 三、 Please describe and compare among autotrophs, heterotrophs, phototrophs and chemotrophs. (20分)
- 四、 Please describe the advantages and disadvantages of using hydrogen as a fuel source. (20 分)
- 五、 One of the methods for removing groundwater trichloroethylene (TCE) is to use permeable reactive barriers containing iron metal (Fe^0) to reduce TCE to ethene by oxidizing Fe^0 to Fe^{2+} . Please list the two half reactions and the overall reaction in this case. (20 分)