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國立臺北科技大學九十九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 11 題，配分共 100 分。
2. 請標明大題、子題編號作答，不必抄題。
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. 名詞解釋：(4 分*6=24 分)

(a) BTEX (b) PAHs (c) RDF (d) Aerosol (e) Will to Wheel (f) Cradle to grave

單選：(4 分*6=24 分)

2. The characteristics used to identify hazardous waste include reactive, corrosive, toxic, and (a) ignitable (b) flammable (c) hazardous (d) water-reactive
3. Which of the following is not a waste minimization technology? (a) process substitution (b) landfilling (c) volume reduction (d) recovery and reuse
4. What percentage of municipal solid waste is currently being recycled in Taiwan (in 2008)? (a) 8% (b) 16% (c) 33% (d) 52%
5. Which of the following is a measure of radiation exposure to man? (a) Rem (b) Gray (c) Curie (d) Roentgen
6. Which of the following has greater health risk? The process with a carcinogenic risk of (a) 1.5×10^{-6} (b) 2.0×10^{-6} (c) 1.5×10^{-5} (d) 2.0×10^{-5}
7. Acidic deposition is principally attributed to the emission of (a) hydrogen sulfide (b) sulfur dioxide (c) benzene (d) ozone
8. If the exhaust gas from an automobile contains 1 percent by volume of carbon monoxide, what will the concentration of carbon monoxide be in milligrams per cubic meter at 25°C and 1 atm pressure? (8 分)

9. 政府會公布各項環境指標如 (一)河川水質指標、(二)優養化指標、(三)空氣污染指標、(四)紫外線指標，請分別詳述各指標考慮之因素，及所數值大小代表的意義。(4 分*4=16 分)

10. 碳交易與碳稅是國際上二個主要控制溫室氣體排放的方法，請分別說明二者的優點及缺點。(8 分)

11. 以中文 100 字說明下列文章之重點 (20 分)

CO₂ capture and storage represents a further option to decreasing national GHG emissions. Other options include reducing energy consumption, increasing energy efficiency, adopting lower or zero carbon fuels and reducing GHGs from non-energy sources. The technology has particular application in western Canada where large fossil fuel users are located close to suitable underground reservoirs. It is an attractive option because it allows continued use of Canada's fossil fuel resources, while at the same time contributing to GHG mitigation and providing the time required for the transition to lower carbon-intensive technologies. Critical steps in the technology, especially CO₂ capture from dilute exhaust gas streams, must still be demonstrated on a large scale and costs are generally high at the current stage of technology development. These costs can be offset when the captured CO₂ has an economic value, e.g. to increase recovery from existing oil reservoirs. If capture costs can be reduced to \$20 per tonne from the current level of \$35-50 or higher, there is potential to deploy the technology widely such that volumes of CO₂ could be stored in Canada to reduce the projected 2010 emissions over the Kyoto target. [Office of Energy Research and Development, Natural Resources Canada, 2000]