

國立中央大學102學年度碩士班考試入學試題卷

所別：大氣科學學系大氣物理碩士班 不分組(一般生) 科目：普通化學 共 1 頁 第 1 頁
大氣科學學系大氣物理碩士班 不分組(在職生)

本科考試禁用計算器

*請在試卷答案卷(卡)內作答

參考用

- (a) What is U-235 and U-238, respectively? 5%

(b) What is the major difference between U-238 and U-235? 5%

(c) What are the major nuclear radioactive materials released into the atmosphere that have caused major concerns during the 11 Mar 2011 Fukushima Daiichi Nuclear power plants accidents, and what are the half-life of these radioactive materials? 10%
- (a) What is acid rain? 5%

(b) What are the main species that cause acid rain? 5%

(c) What are the sources of these species? 5%
- (a) What is air pollution? 5%

(b) What are the main species that contribute to air pollution? 5%

(c) What are the sources of these pollutants? 5%
- (a) What is greenhouse effect? 5%

(b) What are the main greenhouse gases? 5%

(c) Describe the change of carbon dioxide levels in the atmosphere for the latest 50 years. 10%
- (a) What is the chemical species in the atmosphere to be protected following the United National 1987 Montreal Protocol? 5%

(b) What are the species been regulated to help protecting the species described in (a)? 5%
- (a) What are the main volatile organic compounds in the troposphere? 5%

(b) Why volatile organic compounds are important in the troposphere? 5%
- (a) What are the main species that determine chemical life-time of many anthropogenic pollutants in the troposphere? 5%

(b) Describe the chemical composition of the atmosphere. 5%

