

大同大學 106 學年度 (暑)轉學入學考試試題

考試科目:化學

系別:材料工程學系

第 全 頁

註:本次考試 不可以參考自己的書籍及筆記; 不可以使用字典; 不可以使用計算器。

1. 請寫出元素的符號(英文): (20%)
(a) Cobalt, (b) Tin, (c) Copper, (e) Gold, (f) Zinc, (g) Titanium (h) Sodium,
(i) Tungsten, (j) Silver, (k) Iron (l) Argon, (m) Fluorine, (n) Lead, (o) Lithium,
(p) Nickel, (q) Phosphorus, (r) Palladium, (s) Platinum, (t) Potassium, (u) Helium
2. 將上題的元素符號(英文)分類: (20%)
(I) 鹼金屬
(II) 過渡金屬
(III) 鹵素
(IV) 稀有氣體
(V) 非金屬
3. 試寫出下列合成高分子的化學構造? (20%)
(a) Polyethylene (PE); (b) Polystyrene (PS); (c) Polyvinylchloride (PVC);
(d) Nylon 66; (e) TEFLON
4. Write structural formulas for the following: (15%)
(e) Pentane (f) Octane (g) Ethanol, (h) Acetic acid,
(i) 1,2-Difluoroethane
5. 簡答: (15%)
(a) Battery 的種類。
(b) 輻射線的應用有幾種?
(c) 熱力學與動力學
6. 翻譯: (10%)
(a) Pollution from Petroleum Combustion : The end product of air pollution from unburned petroleum in the air is known as photochemical smog.
(b) Pollution from the Production of Electricity: Burning coal for electricity production is a major source of pollution. Coal contains significant quantities of sulfur, which, upon burning, produces sulfur dioxide. Sulfur trioxide is produced upon further oxidation. When this combines with water droplets, it can form sulphuric acid and eventually cause acid rain.