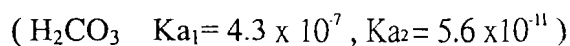中國文化大學 99 學年度轉學招生考試

系組：園藝系三、動物系二年級　　　　日期節次：7 月 28 日第 4 節 15:20-16:40

科目：**普通化學**　　(109-152)

一、Draw the structure and write Chinese name of the following compounds. (a) n-hexane　(b) Ethyl alcohol　(c) Acetic acid　(d) Ethyl acetate　(e) Acetone　(f) Acetylene　(g) Methanol　(h) Glycerol　(i) Benzene　(j) Chloroform　20%

二、Calculate the concentration of all species present (H_2CO_3 , HCO_3^- , CO_3^{2-} , H_3O^+ , and OH^-) in a 0.04 M carbonic acid sulotion.　20%

（ H_2CO_3 　$Ka_1 = 4.3 \times 10^7$, $Ka_2 = 5.6 \times 10^{-11}$ ）

三, .Predict the geometries of the following species with V. S. E. P. R rule under the following procedure (I)give the reasonable possible structure (II)list the Repulsion of electron pair for each structure. (a)ICl_4^-　(b)IF_4^+　(c)SF_4　(d)I_3^-　(e)CH_3^+ 20%

四、describe the following the terms in detail and give a example , explain？ (20%)
 (a) Viscosity　(b) surface tension

五、What is Chemistry ? What is four major classification of chemistry ? 20%

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