

## 淡江大學九十三年學年度碩士班招生考試試題

系別：化學工程與材料工程學系

科目：有機化學

准帶項目請打「○」否則打「×」

簡單型計算機

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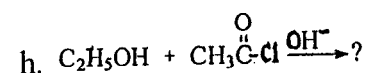
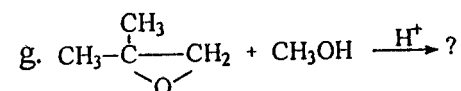
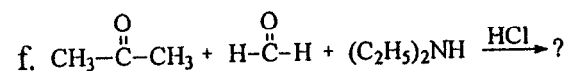
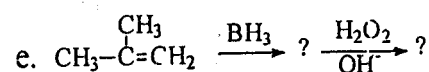
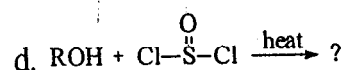
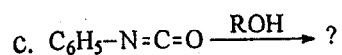
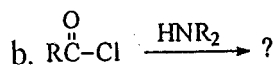
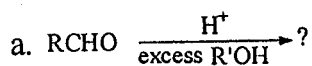
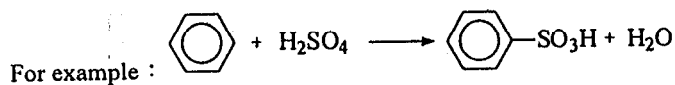
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(36%) 一、Draw the structural formula for each of the following compounds

For example : acetone  $\text{CH}_3\text{COCH}_3$ 

- |                            |                  |
|----------------------------|------------------|
| a. Acrolein                | b. Isoprene      |
| c. 1-Methyl-2-pyrrolidone  | d. Tatraic acid  |
| e. Cyclohexanone           | f. Acetaminophen |
| g. Vinyl acetate           | h. Norbornene    |
| i. Tetramethoxy silane     | j. p-Toluidine   |
| k. N, N-dimethyl formamide | l. Glycine       |

(24%) 二、Draw structures of the products of the following reactions



(20%) 三、Give an example and brief explanation to each of the following

- The Grignard reagent
- Diazotization
- Michael addition
- Claisen-Schmidt reaction
- Friedel-Crafts acylation

◀ 注意背面尚有試題 ▶

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本試題共 2 頁

(10%) 四、A rigid polycarbonate called "Icxan" is polymerized from diphenyl carbonate and bisphenol A. Draw the structure of the polycarbonate.

(10%) 五、Upon hydrogenation, compound A ( $C_4H_8O$ ) is converted into B ( $C_4H_{10}O$ ). On the basis of their infrared spectra (as in the figure below) give the structural formula of A and B.

