

淡江大學八十八學年度碩士班招生考試試題

系別：化學工程學系

科目：有機化學

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Problem One (60 points)

Draw the structural formula for each of the following compounds.

For example: isohexane, $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH} \\ | \\ \text{CH}_2 \\ | \\ \text{CH}_2 \\ | \\ \text{CH}_3 \end{array}$

- (1) acetone
- (2) terephthalic acid
- (3) decalin
- (4) Vinyl chloride
- (5) Acrylonitrile
- (6) 1,3-Butadiene
- (7) Toluene
- (8) Naphthalene
- (9) Isopropyl alcohol
- (10) Ethylene glycol
- (11) Phenol
- (12) N,N-dimethylformamide
- (13) Chloroform
- (14) Dimethyl sulfoxide
- (15) 1-Methyl-2-pyrrolidinone
- (16) Formic acid
- (17) 1,4-Dioxane
- (18) Tetrahydrofuran
- (19) Methylene chloride
- (20) polyethylene

See next Page for Problem Two and Three

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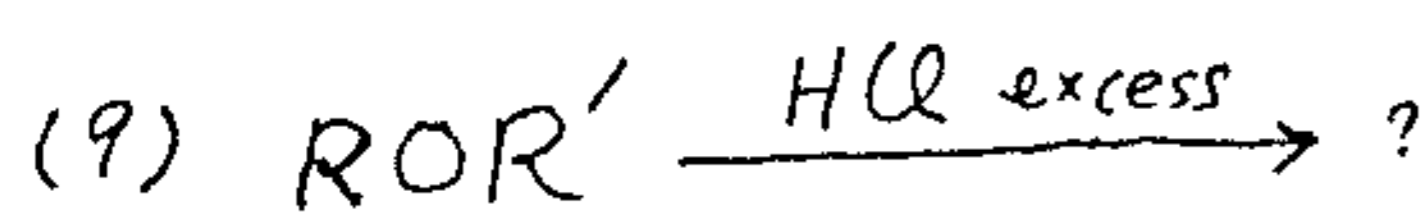
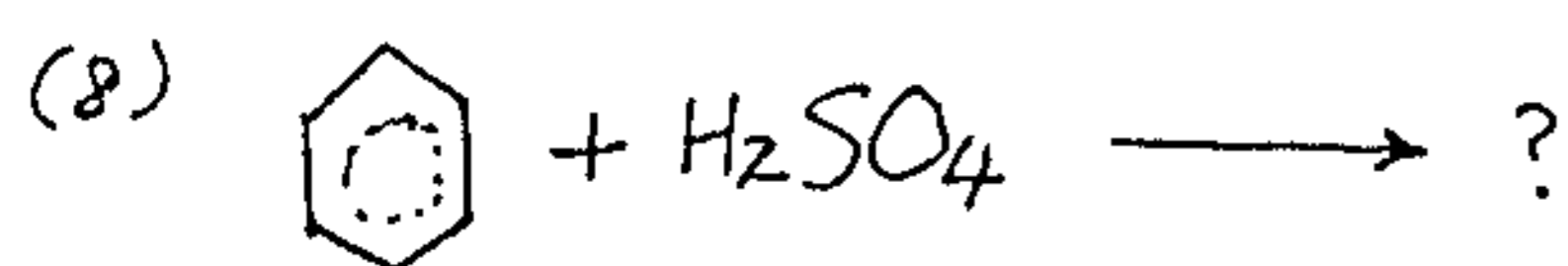
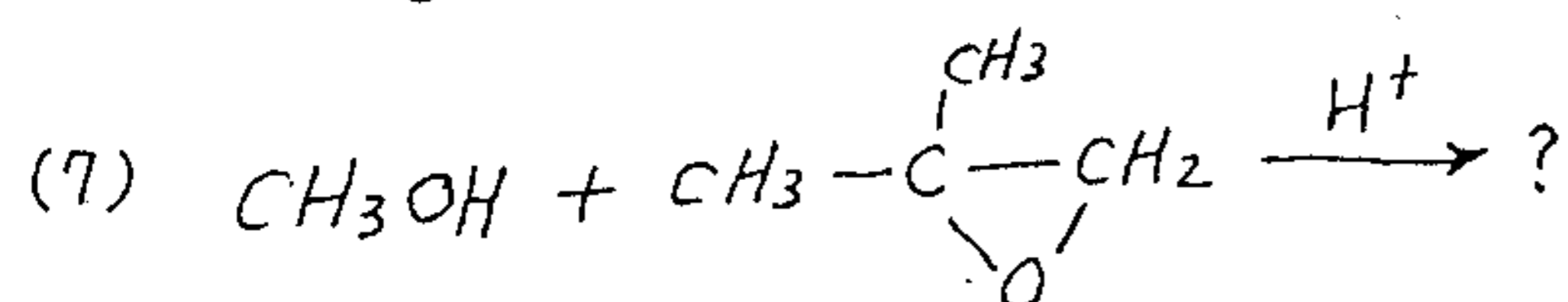
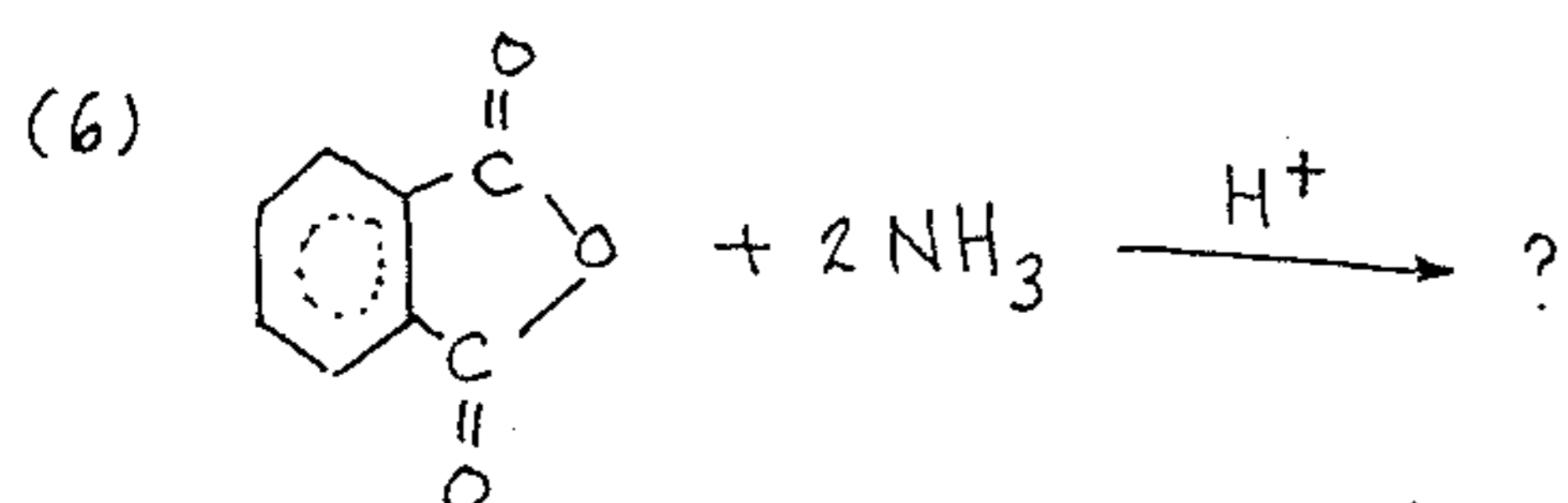
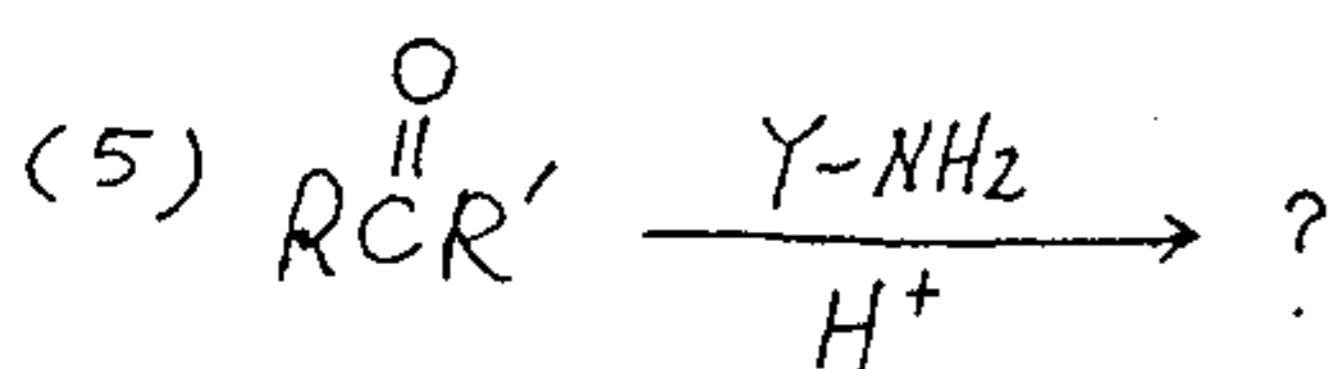
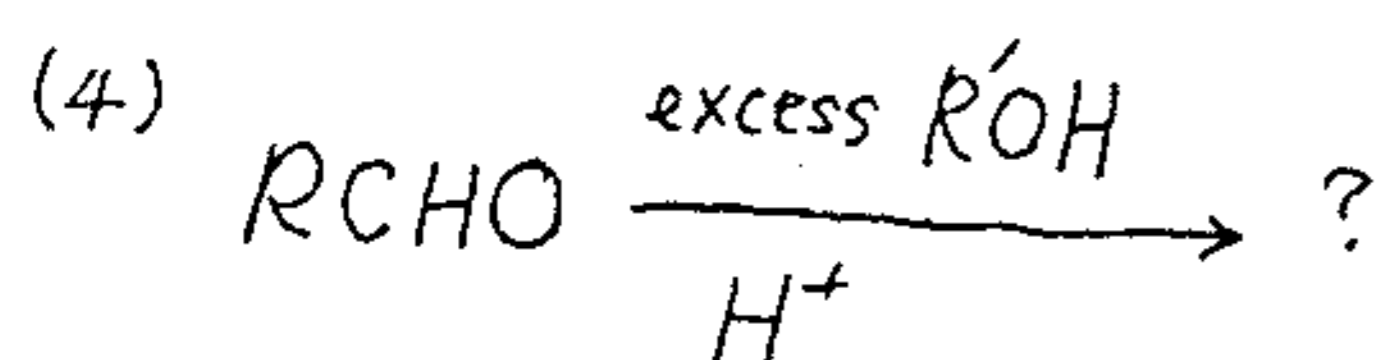
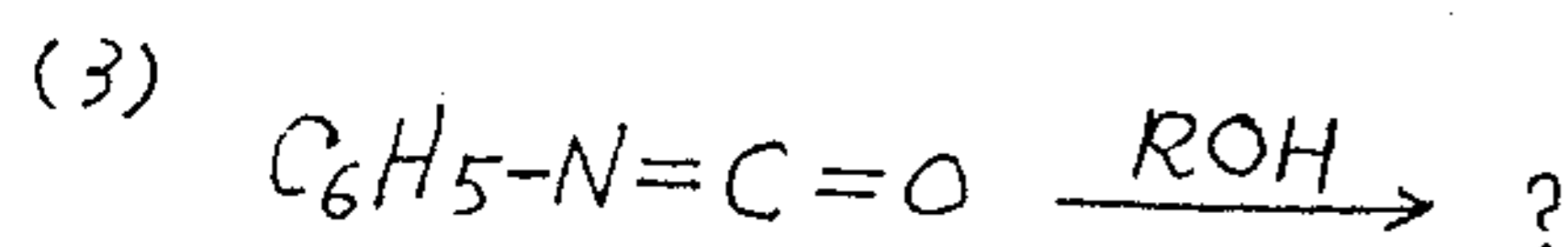
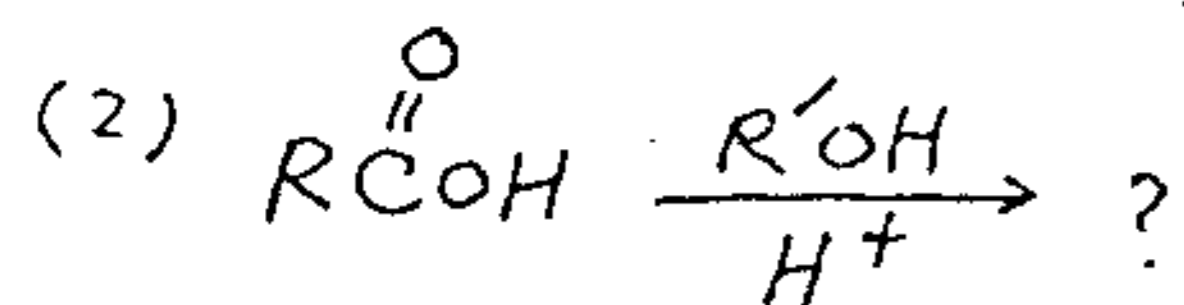
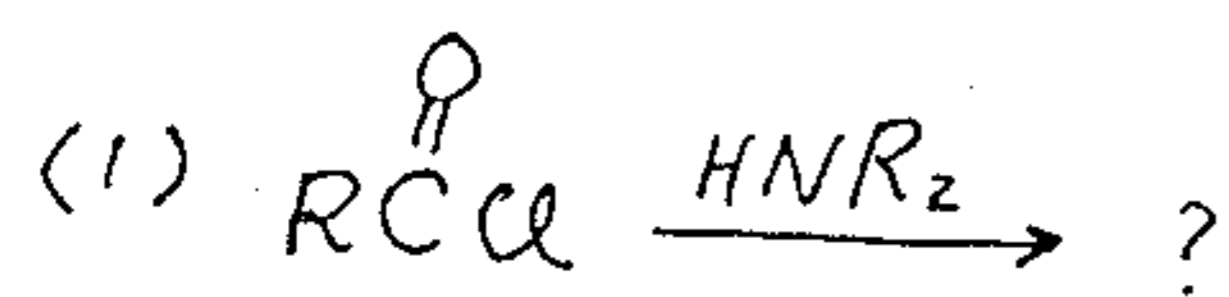
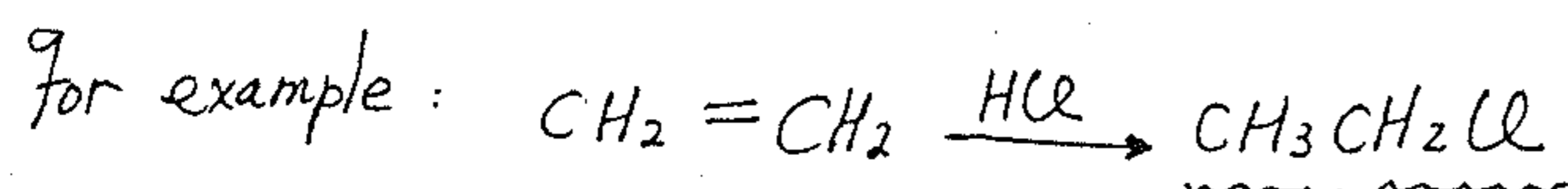
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Problem Two (30 Points)

Draw structures of the organic products of the following reactions.



Problem Three (10 Points)

Identify the Lewis acid and Lewis base in each of the following reactions:

