

國立臺北科技大學

九十二學年度生物科技研究所入學考試

有機化學試題

填准考證號碼

第一頁 共一頁

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注意事項：

1. 本試題共 5 題，配分共 100 分。
2. 請按順序標明題號作答，不必抄題。
3. 全部答案均須答在答案卷之答案欄內，否則不予計分。

1. Show the structure of the following compounds? 20%
a): (E)-2-Chloro-2-butane b): 1,5-Dimethylcyclopentene
c): 1-Hepten-6-yne d): p-Chlorobenzaldehyde
e): Aniline f): Pyrrole
g): Acetone h): Acetonitrile
i): THF j): DMF
2. Show the major products of 2,2-dimethyloxirane reacted with ethanol in basic and acidic conditions. 20%.
3. How to synthesize the following products from the starting material R-CH=CH₂ ?
a): RBrCH-CH₃
b): RCH₂-CH₂Br
c): HOCHR-CH₃
d): RCH₂-CH₂OH 20%
4. How to finish the following functional group transference?
a): RCH₂OH → RCH₂Br b): RCH₂OH → RCHO
c): RCH₂OH → RCOOH d): RCOOH → RCOCl 20%
5. How would you synthesize p-methylphenol from benzene? More than one step is required.
(hint: using a diazonio replacement reaction) 20%