

Practice Exam 3 Answer Key

1) Separation based on migration of a charged species.

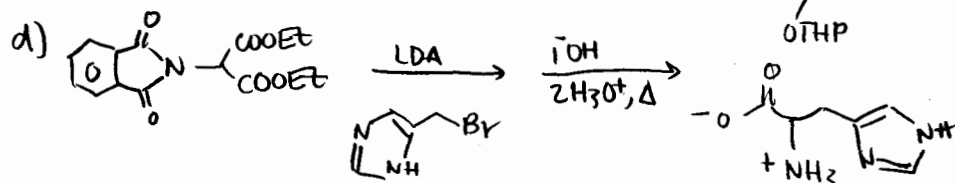
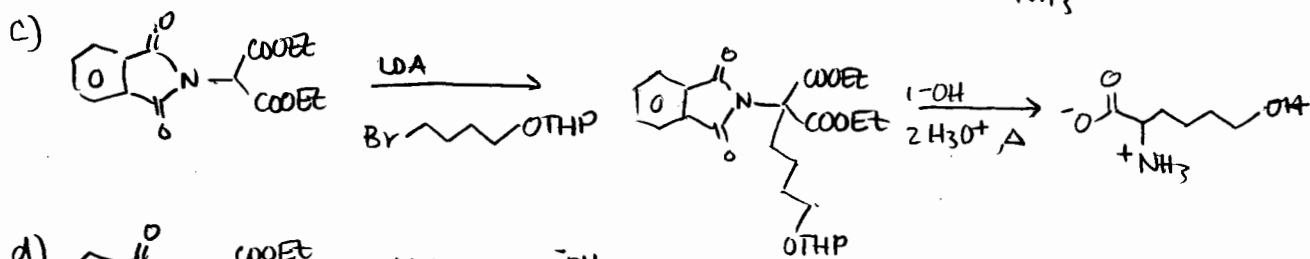
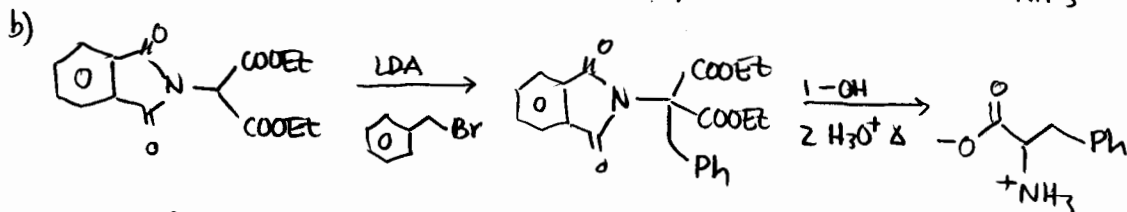
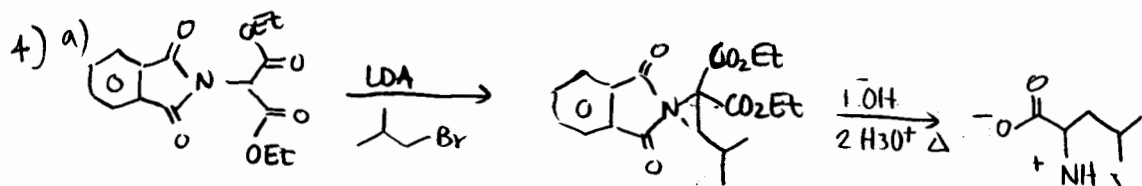
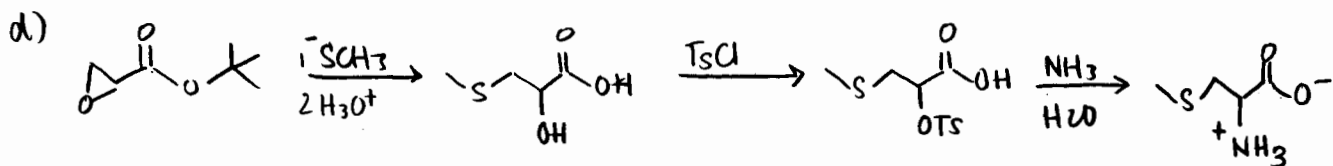
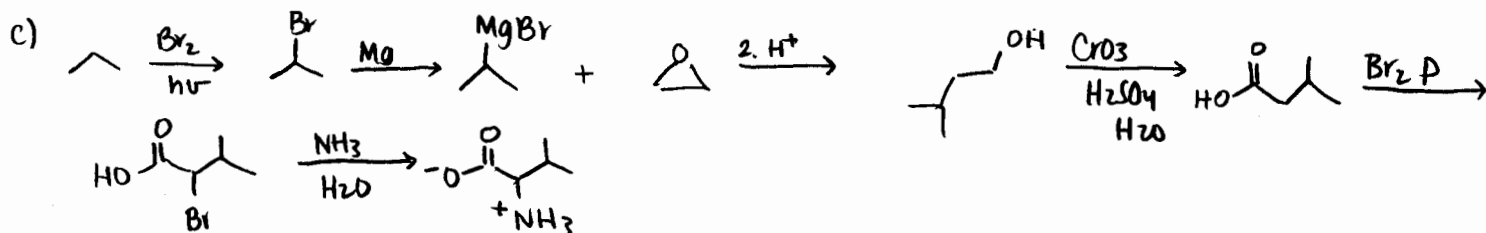
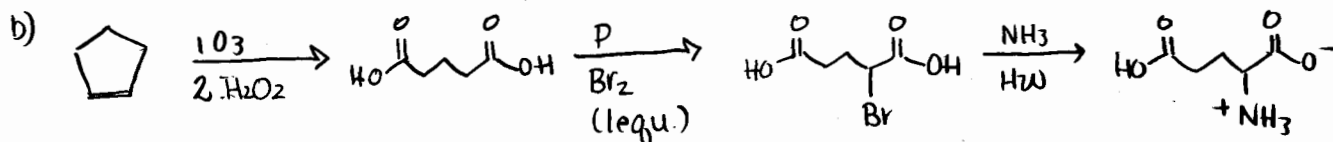
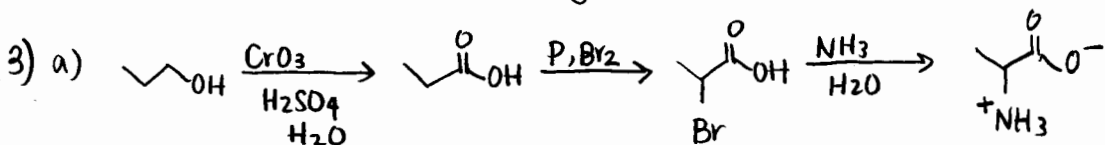
Optimum pH: 5.75 (isoelectric pt. of met)

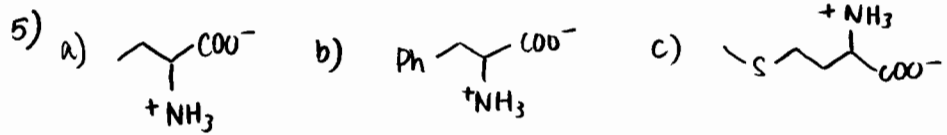
Met \rightarrow neutral (remain stationary)

ASP \rightarrow anionic (go to + electrode)

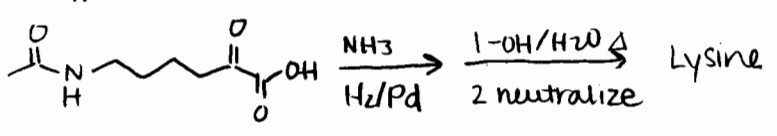
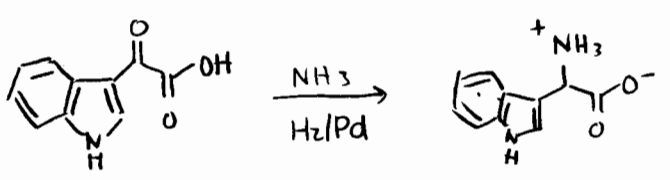
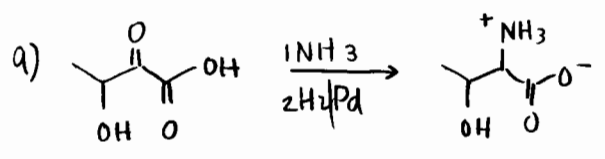
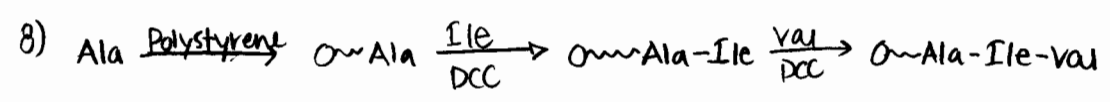
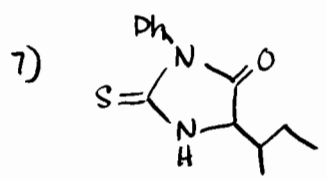
Arg \rightarrow cationic (go to - electrode)

2) The e^- withdrawing COOH makes the NH less nucleophilic & basic
Thus second attacks are less likely.

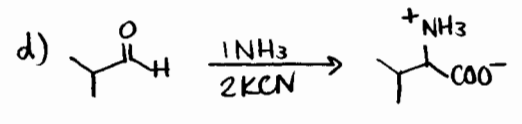
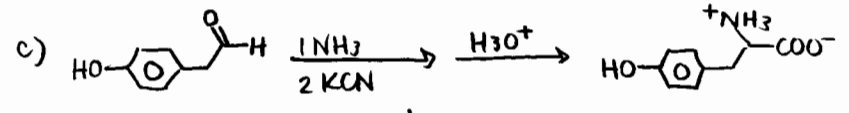
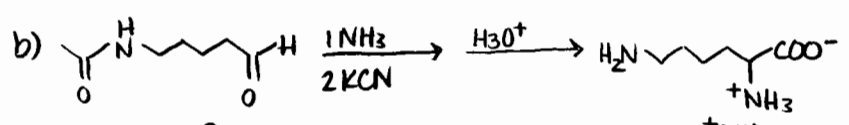
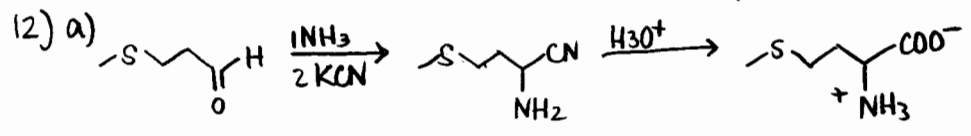
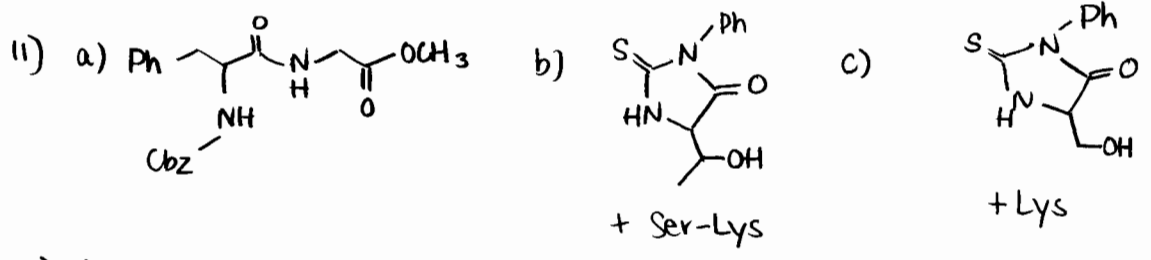


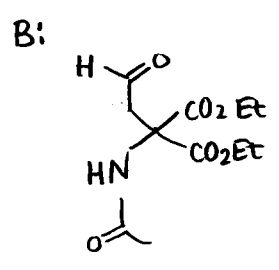
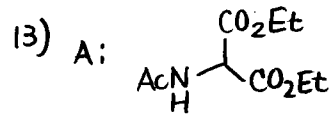


6) Asp-Glu-Tyr-Ala-Ala-Val

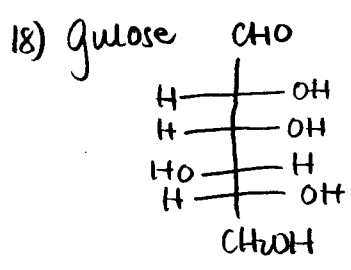
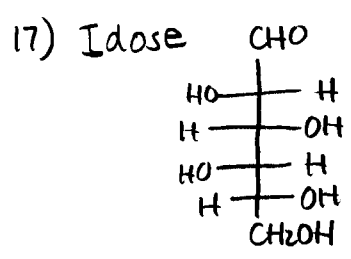
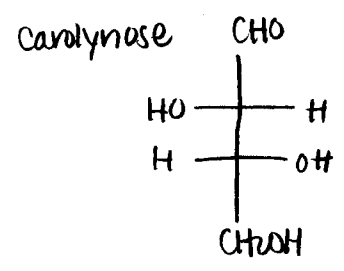
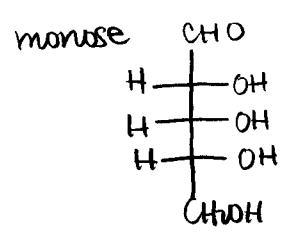
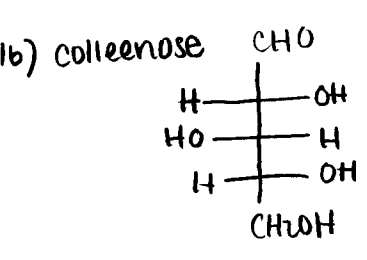
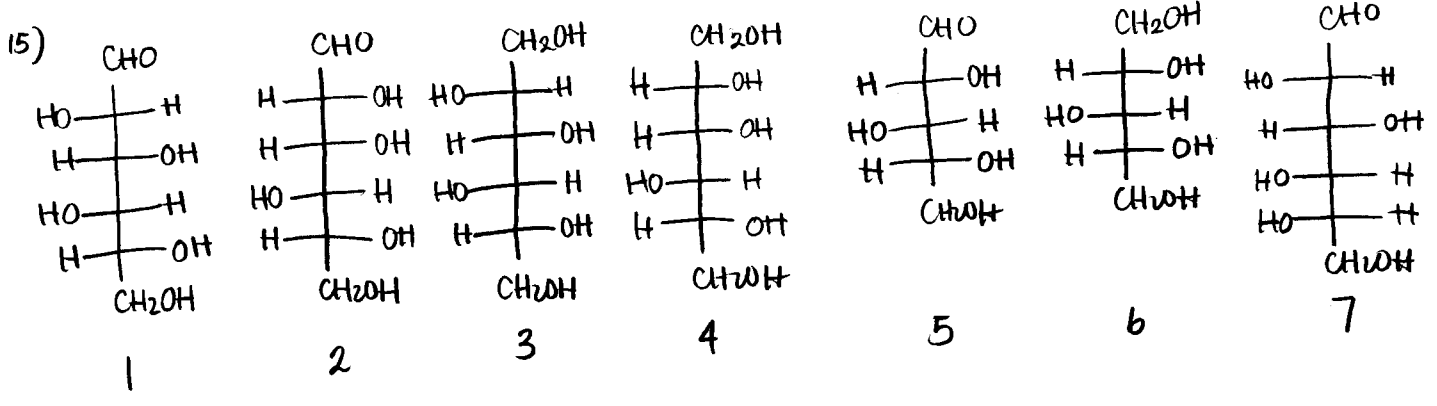
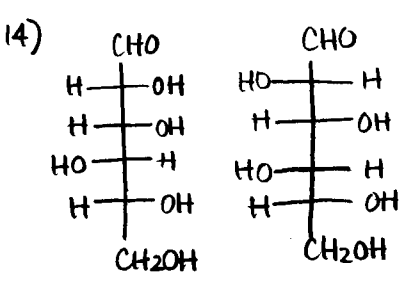


10) Arg-Pro-Pro-Gly-Phe-Ser-Pro-Phe-Arg





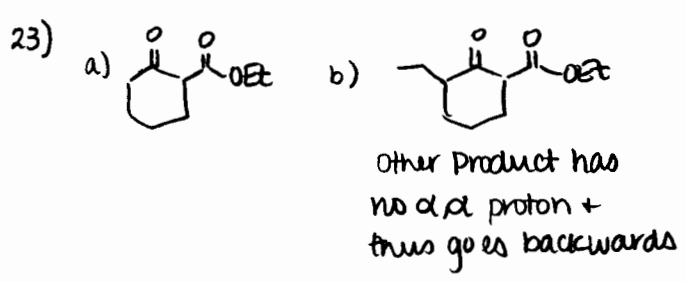
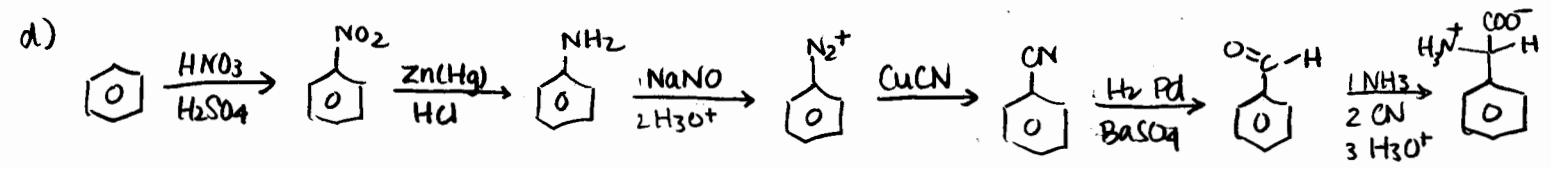
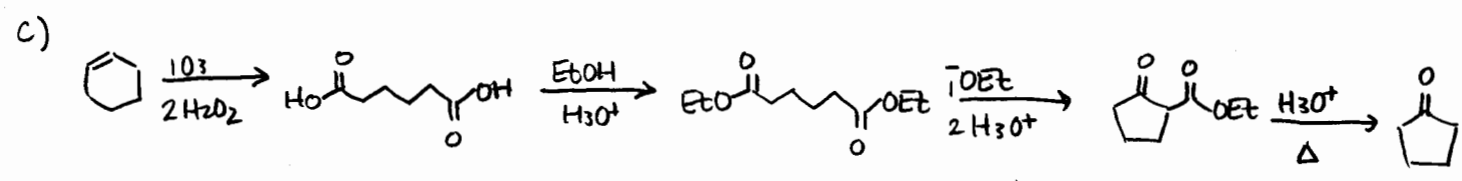
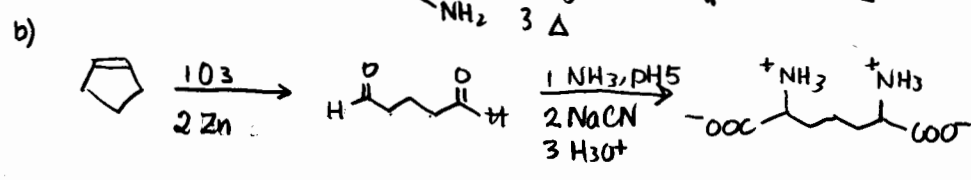
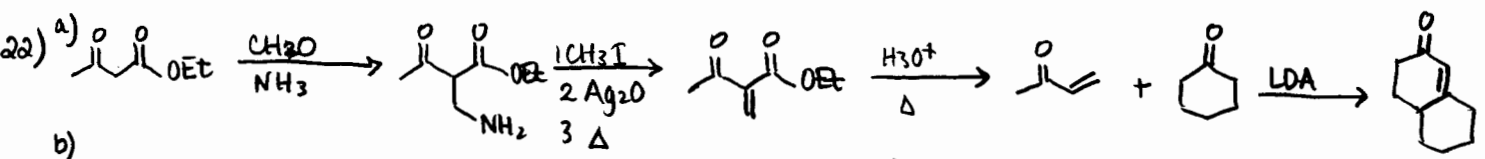
i. $\text{CrO}_3, \text{H}_2\text{SO}_4, \text{H}_2\text{O}$ ii. $\text{I}^-/\text{H}_2\text{O}, \Delta$
 $2 \text{H}_3\text{O}^+, \Delta$



19) See your lecture notes for this mechanism

20) See your lecture notes for this mechanism

21) The acid hydrolyzed the peptide!



both products have no α, α protons + thus go backwards

