

Aminoacids and Peptides, Problem Set #10

Not due

Read Chapter 26

Exercises:❖ McMurry 5th Ed Problems Ch.26: 26.35, 26.36, 26.37, 26.38, 26.39, 26.48, 26.51,

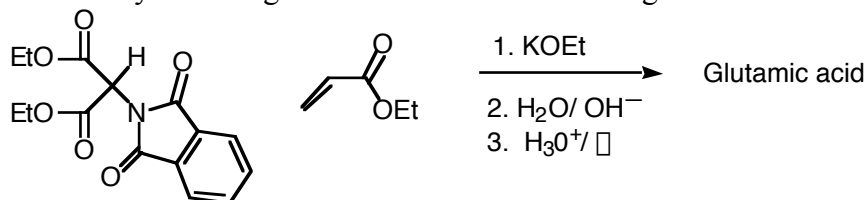
❖ Additional Problems:

1. How many stereoisomers are there of threonine? 4

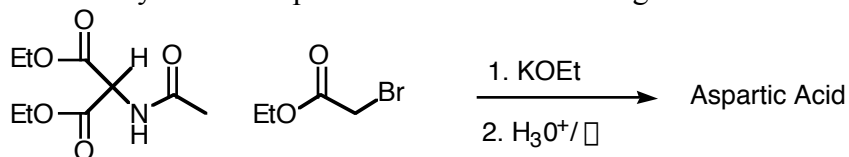
How about serine? 2

2. Would it be better to synthesize valine from an amidomalonate synthesis or a Strecker synthesis? Why? Valine should be synthesized by a Strecker to avoid elimination of from alkylation of the secondary halide.

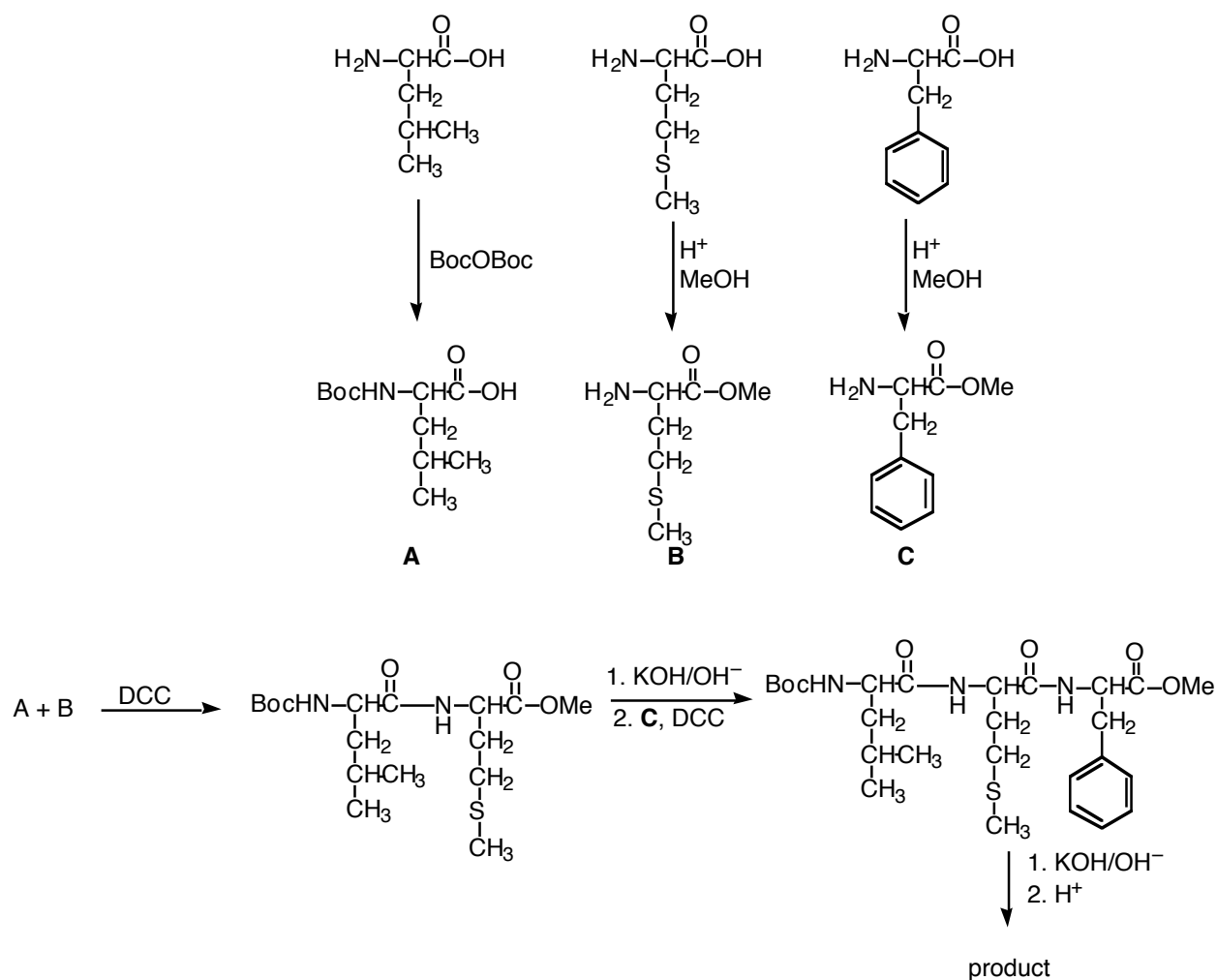
3. Show how you would synthesize glutamic acid from the starting material below.



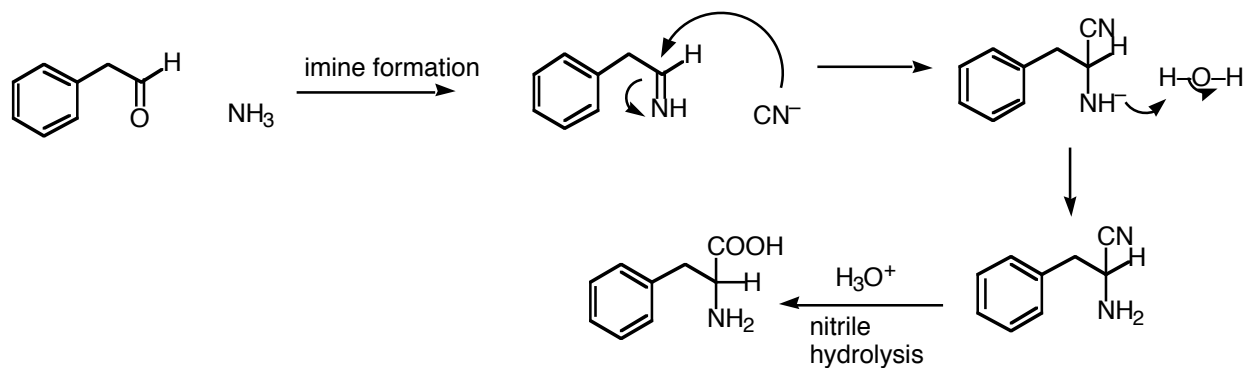
4. Show how you would synthesize aspartic acid from the starting material below.



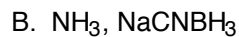
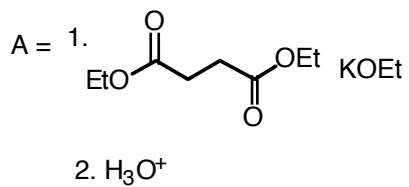
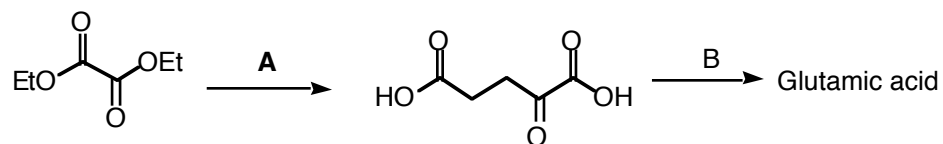
5. Show how you would synthesize the following tri-peptide with unprotected aminoacids as the starting material.



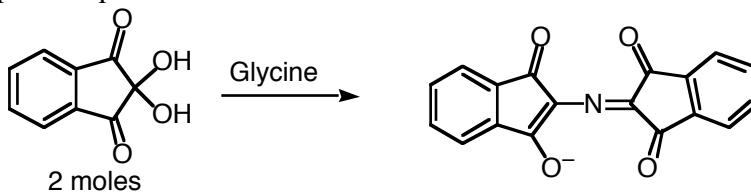
6. Show the mechanism of how you would synthesize phenylalanine from the starting materials shown.



7. What are the reagents A and B to accomplish the following transformation?



8. What is the purple compound? Write a mechanism for its formation.



mechanism is in the lecture notes and the book.