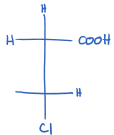
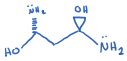


1) Provide the name of the structure below and explain whether it is a D or L enantiomer.



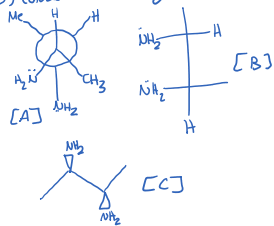
2) Consider the compound below



a) label the chiral centers with a *

b) This molecule cannot rotate the plane of polarized light. Is this true or false? Explain?

3) Consider the following molecules



a) identify the chiral centers

b) determine R/S stereochemistry

c) what is the relationship (enantiomer, diastereomer, same molecule) between

* A and B

* B and C

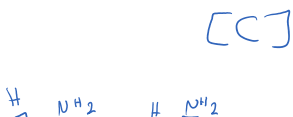
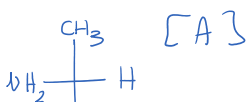
4) A mixture of enantiomers A(+) and A'(-) has $[\alpha]_{\text{mix}}$ equal to 22°. If the enantiomeric ratio is 5:1 (A:A') what is the $[\alpha]$ of the pure enantiomers A and A'?

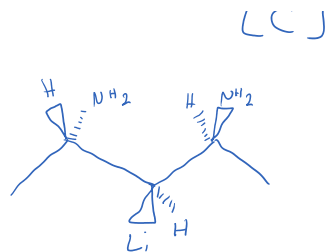
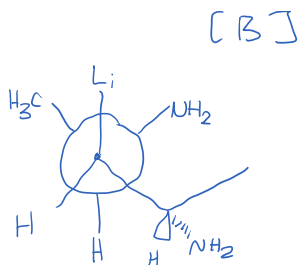
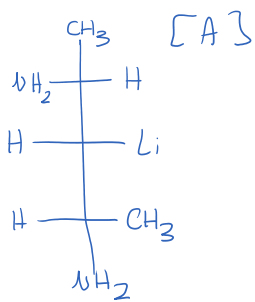
5) True or false

a) The specific rotation of a racemic mixture is always 0°

6) Draw the structure 2R-bromo-pent-3(E)-enoic acid.
a) is the structure D or L enantiomer? Explain

7) Assign R/S configuration to the following molecules





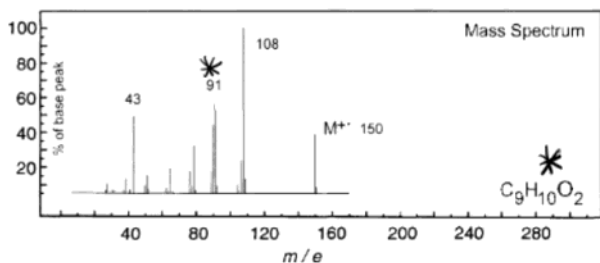
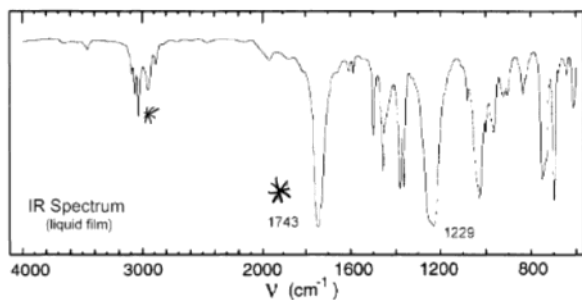
What is the relationship between A and B?
 Circle the correct response
 a) mesomers b) diastereomers c) enantiomers

8) A pill contains both enantiomers of a drug. They're just mirror images so they should behave the same in the body.
 Discuss with an example.....

9) The d enantiomer of a molecule has an optical rotation of $+14.3^\circ$. Calculate the optical rotation of a 3:2 mixture of enantiomers where the d enantiomer is in excess.

5) Interpret the following full meal deal

Problem 110



UV Spectrum

- λ_{max} 252 nm ($\log_{10} \epsilon$ 2.2)
- λ_{max} 257 nm ($\log_{10} \epsilon$ 2.3)
- λ_{max} 262 nm ($\log_{10} \epsilon$ 2.2)
- λ_{max} 264 nm ($\log_{10} \epsilon$ 2.2)
- λ_{max} 268 nm ($\log_{10} \epsilon$ 2.0)

solvent: ethanol

