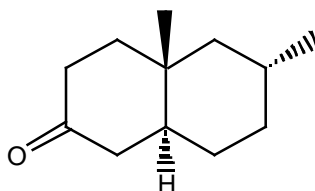
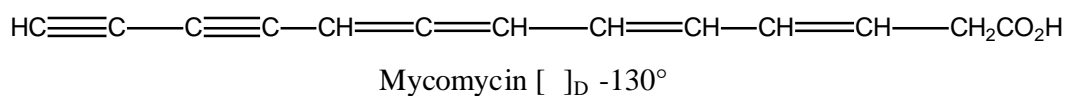


Problem Set #4
CH241-2001F

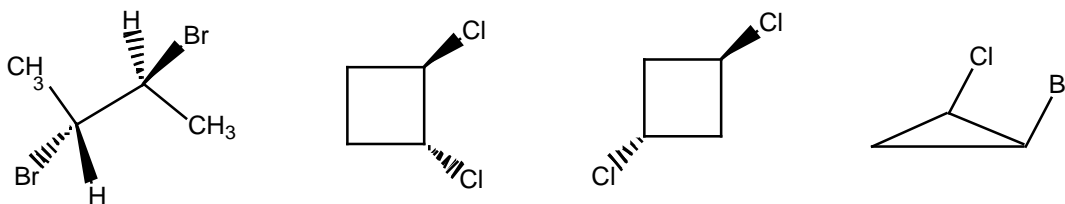
- [1] Provide structures for the following. Assign the R or S configuration to the appropriate stereogenic centers.
- A pair of enantiomers of the formula C_3H_6O .
 - A meso compound of the formula $C_4H_6Br_2$.
 - A pair of diastereomers of the formula C_4H_9OCl .
- [2] (a) Identify the stereogenic centers in the following molecule and label them as (*R*) or (*S*).



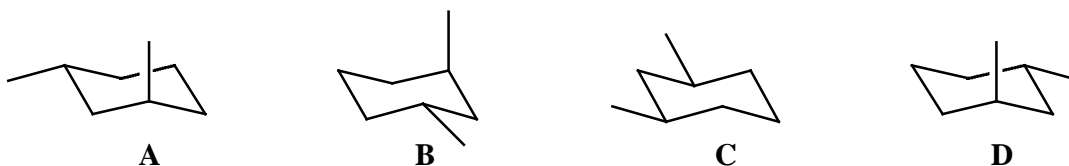
- (b) Explain why mycomycin, a naturally occurring antibiotic, is optically active.



- (c) Identify the chiral compounds among the following.



- [3] Examine the following molecules and answer the questions that follow.



- Which two structures constitute a pair of enantiomers?
- Which two structures constitute a pair of diastereomers?
- Which two structures are identical?
- Which structure represents a meso compound?
- Which two structures are interconverted by a ring flip?