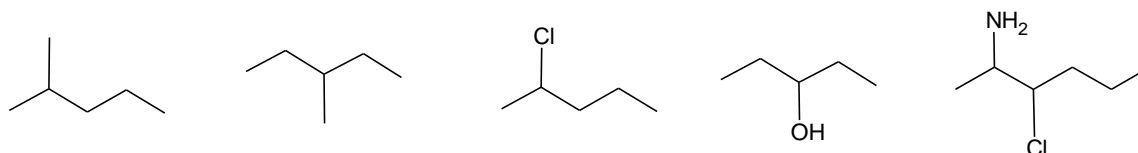
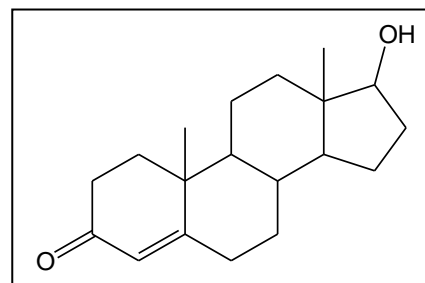


- 1) Which of the following statements regarding optical rotation is not true?
- All (+) enantiomers are dextrorotatory.
 - All R enantiomers are dextrorotatory.
 - All (-) enantiomers rotate plane-polarized light in a counterclockwise direction.
 - All (+) and (-) enantiomers rotate plane-polarized light in opposite directions.
- 2) Place a star “*” on the chiral center, if present, in the following compounds.



- 3) How many stereogenic centers are there in the following molecule (the naturally occurring stereoisomer is the male hormone testosterone)?

- Three
- Four
- Six
- Seven



- 4) Arrange in the order of ranking higher to lowest ranking according to Cahn-Ingold-Prelog system. Rank the following from highest to lowest priority according to the Cahn-Ingold-Prelog system.
- CH₃
 - CN
 - CH₂OH
 - Br

- 5) Answer the following questions:

<p>What is the relationship between the pairs of molecules given: enantiomers, same, or different?</p>	<p>Is the following molecule chiral or achiral?</p>	<p>What is the configuration of</p>	<p>What is the configuration of</p>

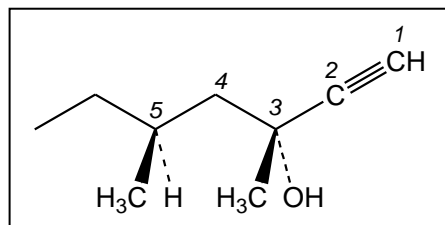
6) Answer the following:

Which of the following molecule is chiral?	<p>1 2 3</p>	
Which one of the following are different from the others?	<p>1 2 3 4</p>	
Which of the following have the <i>S</i> configuration?	<p>1 2 3</p>	

Compounds with Two Chiral Centers

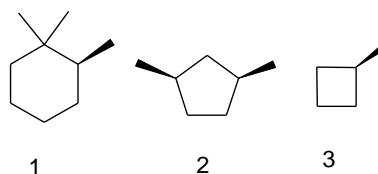
7) What is the configuration of the two chiral centers in the following molecule?

- 3R,5R
- 3R,5S
- 3S,5R
- 3S,5S



8) Which of the following compounds is/are chiral?

- only 1
- only 1 and 2
- only 2 and 3
- 1, 2 and 3



9) Which of the following is the definition of a meso compound?

- A molecule with stereocenter centers which is chiral
- A molecule with stereocenter centers which is not chiral
- A diastereomer with no stereocenter centers
- A chiral compound with more than one stereocenter center

10) How many stereoisomers of 3-bromo-2-butanol, $\text{CH}_3\text{CH}(\text{OH})\text{CHBrCH}_3$, exist?

- 1
- 2
- 3
- 4