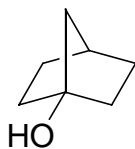


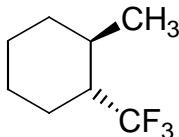
NAME: _____

(1-10) are True or False.

- 1) Kinetics is the study of reaction rates.
- 2) The quantum yield for any free radical chain process is less than one.
- 3) If stronger bonds are broken, and weaker bonds formed, then the reaction is endothermic.
- 4) The below hydrogenation of ethene has a favorable entropy change.
 $C_2H_4 + H_2 \rightarrow C_2H_6$
- 5) The bond dissociation energy is the amount of energy required to produce the most stable pair of ions.
- 6) This molecule is chiral.



- 7) This molecule is chiral.



- 8) These compounds are enantiomers.



9) S_N1 reactions always proceed with total inversion of stereochemistry.

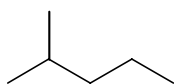
10) $E1$ reactions involve carbocation intermediates.

11-14) Circle (or draw in) the C-H bond in each molecule that has the lowest bond dissociation energy

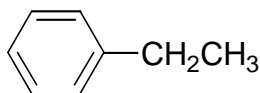
11)



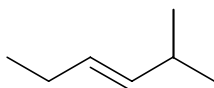
12)



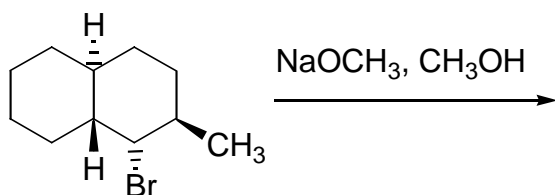
13)



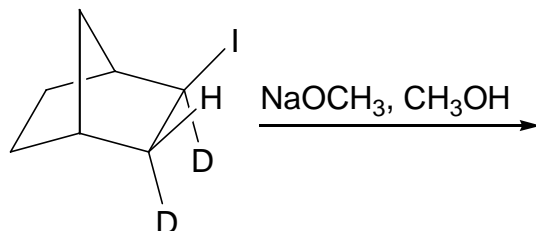
14)



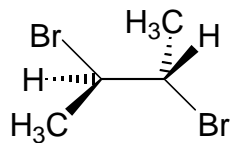
15 and 16) Draw the product of the following ELIMINATION reactions.



16)



17) Star (asterix, *) and assign the (R) or (S) configuration to any chiral centers in the below molecule.



18) Draw the product formed when the above compound reacts with potassium iodide.

19) Is the correct name for compound in (17) *meso*-2,3-dibromobutane or (\pm)-2,3-dibromobutane?

20) Name one similarity between the $\text{S}_{\text{N}}1$ and $\text{E}1$ reaction mechanisms.

BONUS QUESTION for 1 extra point

Explain how (R) and (S) are mathematically related to the (+) and (-) rotation of plane polarized light. (Use back if required).

SUMMER 1999

Quiz #2 Ch 4-6 _____ points).

NAME: Homer Lytic Cleavage

(1-10) are True or False.

T

1) Kinetics is the study of reaction rates.

F

2) The quantum yield for any free radical chain process is less than one.

T

3) If stronger bonds are broken, and weaker bonds formed, then the reaction is endothermic.

F

4) The below hydrogenation of ethene has a favorable entropy change.
 $C_2H_4 + H_2 \rightarrow C_2H_6$

F

5) The bond dissociation energy is the amount of energy required to produce the most stable pair of ions.

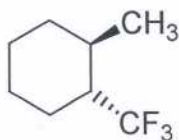
F

6) This molecule is chiral.

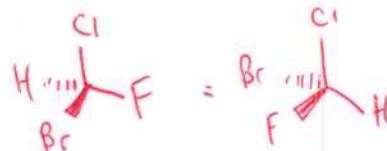
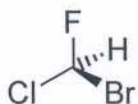
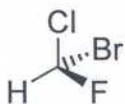


T

7) This molecule is chiral.



8) These compounds are enantiomers.



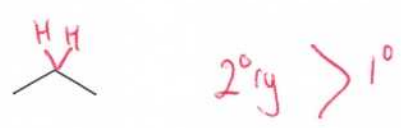
F
T

9) S_N1 reactions always proceed with total inversion of stereochemistry.

10) $E1$ reactions involve carbocation intermediates.

11-14) Circle (or draw in) the C-H bond in each molecule that has the lowest bond dissociation energy

11)



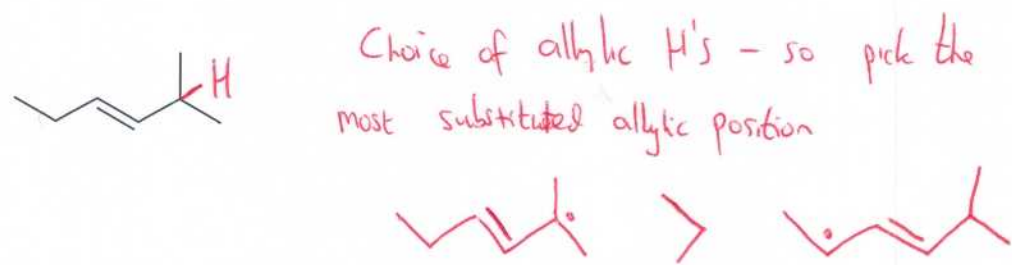
12)



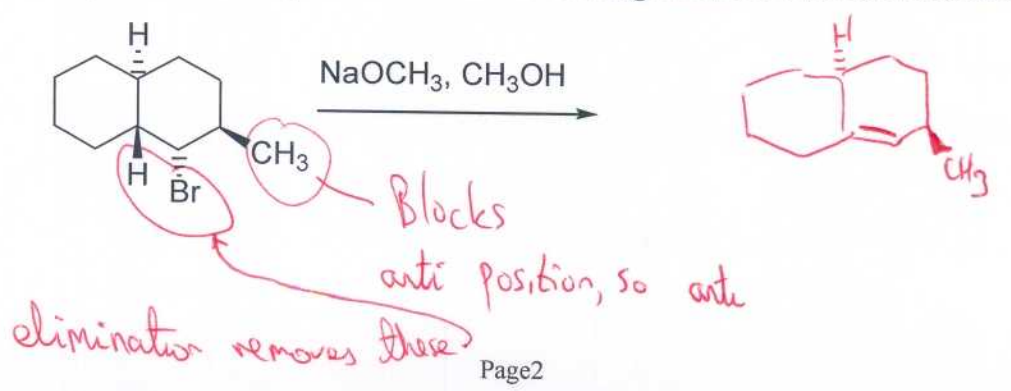
13)



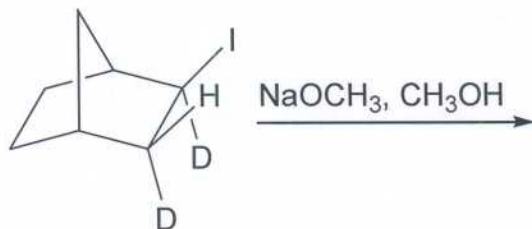
14)



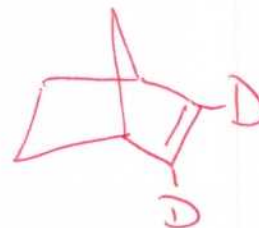
15 and 16) Draw the product of the following ELIMINATION reactions.



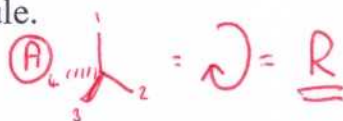
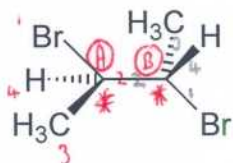
16)



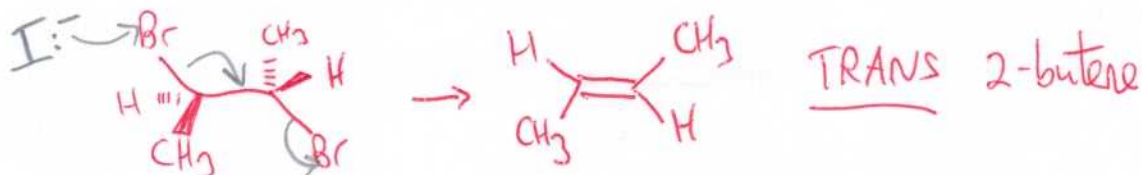
SYN CO-PLANAR ELIMINATION.



17) Star (asterix, *) and assign the (R) or (S) configuration to any chiral centers in the below molecule.



18) Draw the product formed when the above compound reacts with potassium iodide.



19) Is the correct name for compound in (17) meso-2,3-dibromobutane or (±)-2,3-dibromobutane?

20) Name one similarity between the S_N1 and $E1$ reaction mechanisms.

CATIONS, UNIMOLECULAR, REARRANGEMENTS, FASTER IN POLAR SOLVENTS... etc.

BONUS QUESTION for 1 extra point

Explain how (R) and (S) are mathematically related to the (+) and (-) rotation of plane polarized light. (Use back if required).

They are NOT related.