Organic (Chem II (CHEM 442) S	pring 2016 Dr. Hahn's Class Form A MWF 1 pm Quiz I Exam#
Sign Nan	ne Kery	Print Name
Please sh	low work on all question	s for partial credit even on questions which do not specify. (25 pts) White
1a. F	or the element Sn sh sh sh seach letter, 6 pts to	ow the electron configuration for all <u>valence</u> electrons in the format 1s ² , 2s ² , al) 5 2 5 2 w many valence electrons is in the atom? 4
(3 pts ear	ch letter, 6 pts total) Cl 4/m Chi CH ₂ CH ₂ O H H 3	nake up one example of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of isomer and draw it in the space Chapter of the following type of
2 8	Complete the following	g reaction mechanism: Electrophilic Addition of H Br to alkene. S _N 1 Show electron pushing arrows. 3 D drawings not needed (13 pts total, 9 pts)
CH₃ H	H CH3	Chy Hole Bri
	Draw the matching ener ism. (4 pts)	gy diagram and show what part of the energy diagram matches what part of the
arrow v	with the correct product	3 ways to do a hydrogenation reaction on an alkyne, match the stuff over the by filling in the blank. (a) Lindlar's catalyst (b) Li ^o / NH ₃ (c) Pt / H ₂ II H CH ₃ CII ₃
CH ₃ ·	- C≡C—— CH ₃ →	CH_3 C C CH_3 C C

Organic Chem II (CHEM 442) Sprir	ng 2016 Dr. Hahn'	s Class Form B M	WF 1 pm Quiz I Ex	xam #
Sign Name			Print Name		·
	on all questions fo	or partial credit eve	n on questions whi	ch do not specify. (2	
1a. For the ele etc (3 pts each				ence electrons in the	
b. For the sar	ne element, <u>how n</u>	nany valence clect	rons is in the atom	?(
2. For the mo		te up one example	of the following typ	pe of isomer and dra	iw it in the space Lhave
Cl	a) s -l ₂ -CH ₂ -O-H	structural (or const	itutional) isomer	pe of isomer and dra	mar
CH ₃			CH	5 >H H	• >
2. a. Comple pushing arrows. 3	ete the following results to the followings not not not be seen as the followings of the control of the followings for the followings for the control of the followings for the f	rmational isomer) caction mechanism eeded (13 pts total	H H C LIN H : S _N 1 Show corre	ect Lewis Dot struct	лH Н
Extra Credit: (2)	ots) E	vays to do a hydrog	me genation reaction on (a) Lindlar's cata	ergy diagram matcher n an alkyne, match the alyst (b) Li° / NH ₃ CH ₃ H	he stuff over the

Please show work on all questions for partial credit even on questions which do not specify. (25 pts) White

- 1a. For the element **Sn** show the electron configuration for all <u>valence</u> electrons in the format 1s², 2s², ... etc (3 pts each letter, 6 pts total)
- b. For the same element, **how many valence** electrons is in the atom?
- 2. For the molecule below, make up one example of the following type of isomer and draw it in the space (3 pts each letter, 6 pts total)

Cl a) structural (or constitutional) isomer
$$CH_3 \qquad H$$

- b) enantiomer (either 3D drawing or Fisher)
- 2. a. Complete the following reaction mechanism: Electrophilic Addition of H Br to alkene. S_N1 Show correct Lewis Dot structures & electron pushing arrows. 3 D drawings not needed (13 pts total, 9 pts)

b. Draw the matching energy diagram and show what part of the energy diagram matches what part of the mechanism. (4 pts)

Extra Credit: (2 pts) There are 3 ways to do a hydrogenation reaction on an alkyne, match the stuff over the arrow with the correct product by filling in the blank. (a) Lindlar's catalyst (b) $\mathrm{Li}^{o}/\mathrm{NH}_{3}$ (c) $\mathrm{Pt}/\mathrm{H}_{2}$

$$CH_3 - C = C - CH_3 \rightarrow CH_3 - CH_3 \qquad CH_3 \qquad$$

Please show work on all questions for partial credit even on questions which do not specify. (25 pts)

- 1a. For the element Se show the electron configuration for all <u>valence</u> electrons in the format 1s², 2s², ... etc (3 pts each letter, 6 pts total)
- b. For the same element, **how many valence** electrons is in the atom?
- 2. For the molecule below, make up one example of the following type of isomer and draw it in the space (3 pts each letter, 6 pts total)

- c) conformation isomer (need Newman projection) (should draw a pair, the above molecule does not show enough information to show a conformational isomer)
- 2. a. Complete the following reaction mechanism: $S_N 1$ Show correct Lewis Dot structures & electron pushing arrows. 3 D drawings not needed (13 pts total, 9 pts)

b. Draw the matching energy diagram and show what part of the energy diagram matches what part of the mechanism. (4 pts)

Extra Credit: (2 pts) There are 3 ways to do a hydrogenation reaction on an alkyne, match the stuff over the arrow with the correct product by filling in the blank. (a) Lindlar's catalyst (b) Li^0/NH_3 (c) Pt/H_2

$$CH_{3} \longrightarrow C \equiv C \longrightarrow CH_{3} \longrightarrow CH$$