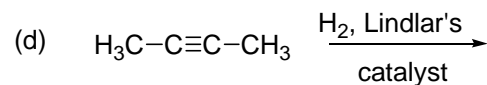
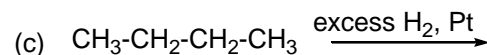
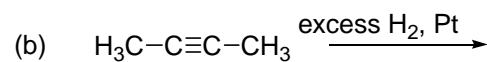
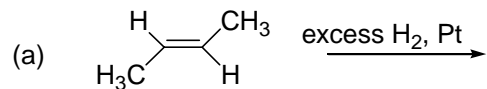


Name _____

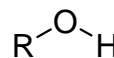
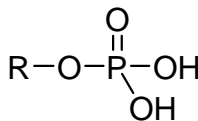
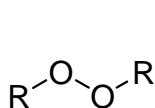
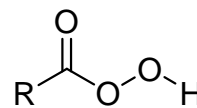
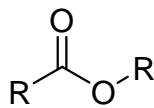
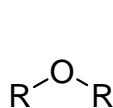
If you do not want your graded quiz placed in the box outside my office, then please tick here _____

Answer all the questions.

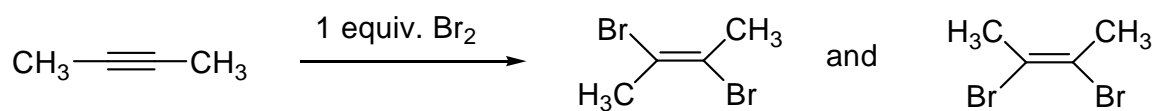
1) Give the products (if any) formed in the following reactions: (12pts)



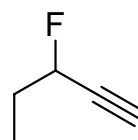
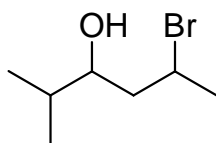
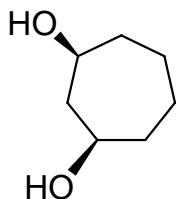
2) Name the class of compound (functional group) for each of the below molecules. (12pts)



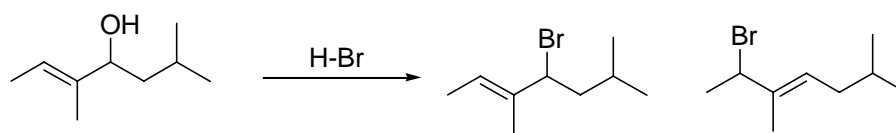
3) When Br₂ is added to ALKENES, the *anti* addition product is formed exclusively due the intermediate bromonium ring. Explain why in the case of the addition of one equivalent of Br₂ to ALKYNES (as shown below), it is different, and both the *syn* and *anti* addition products are produced. (8pts)



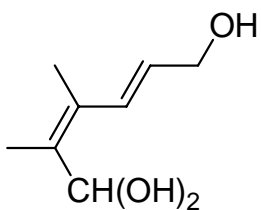
4) Name (in IUPAC form) the following three compounds. (12pts)



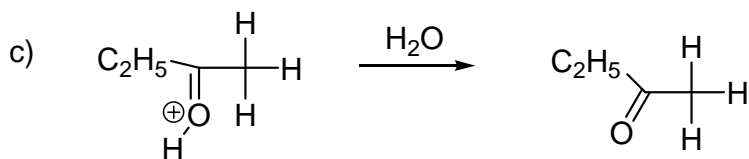
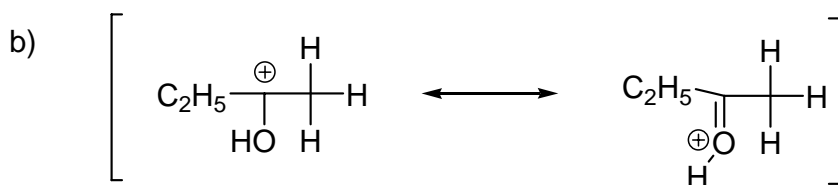
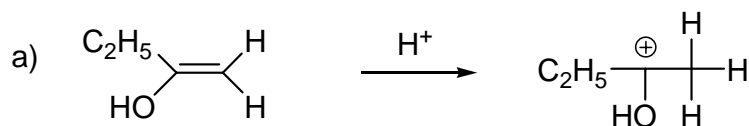
5) Explain the formation of both products in this substitution reaction. (12pts)



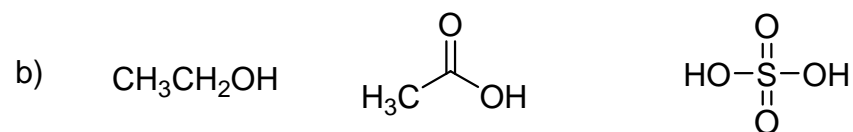
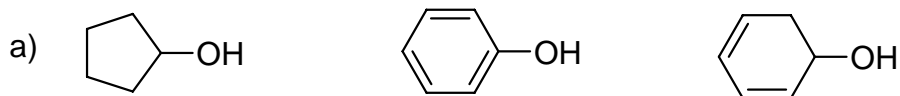
6) For the compound below, how many sp^3 hybridized carbon atoms are there? (2pts)



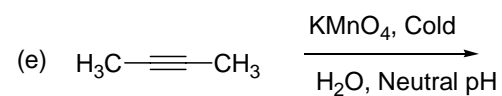
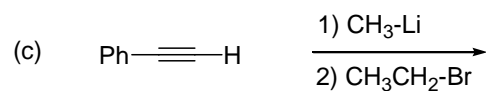
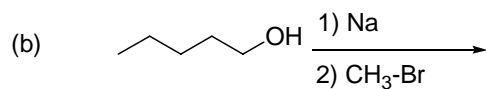
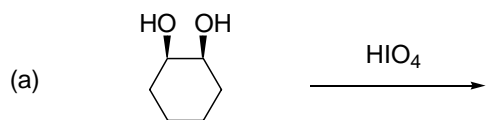
7) ENOLS are generally more stable in their KETO form. For the following three steps of keto-enol tautomerization, draw in all the appropriate curly arrows representing movement of two electrons. (8pts)



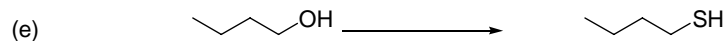
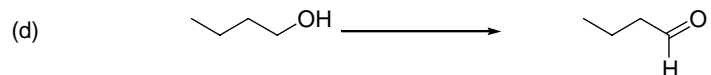
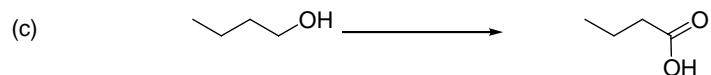
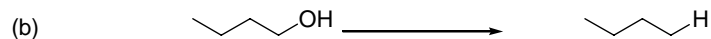
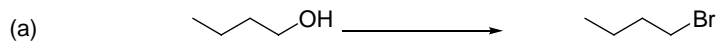
8) Circle the **STRONGER** acid of each threesome: (4pts)



9) Draw the products of the following transformations. (15pts)



10) Give reagents for the following transformations. (15pts)



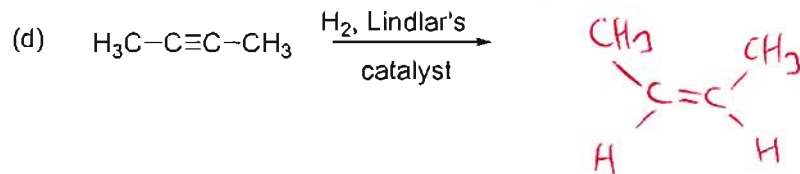
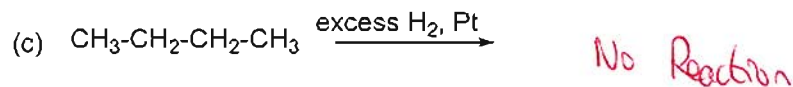
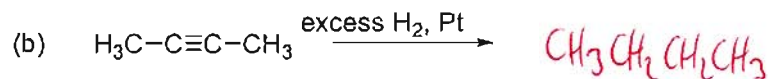
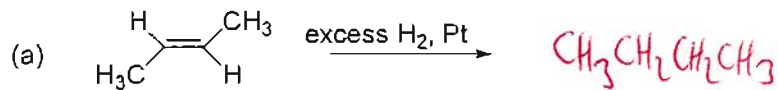
Name

R.U. PHENOL WRIGHT

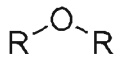
If you do not want your graded quiz placed in the box outside my office, then please tick here _____

Answer all the questions.

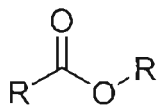
1) Give the products (if any) formed in the following reactions: (12pts)



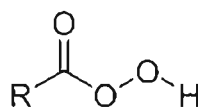
2) Name the class of compound (functional group) for each of the below molecules. (12pts)



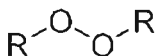
ETHER



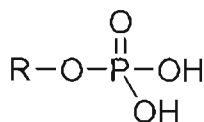
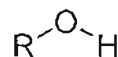
ESTER



PEROXY ACID

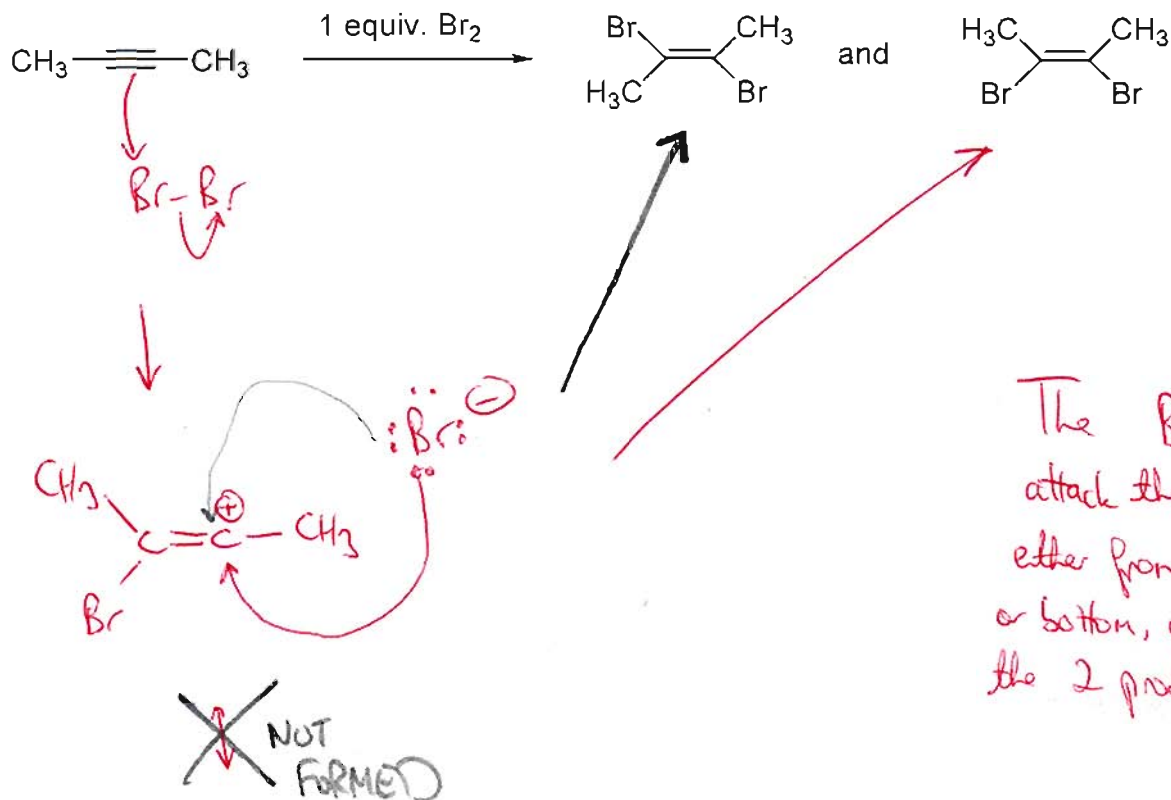


PEROXIDE

PHOSPHATE
ESTER

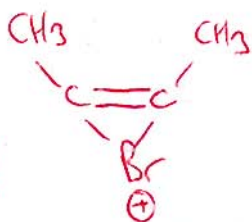
ALCOHOL

3) When Br_2 is added to ALKENES, the *anti* addition product is formed exclusively due to the intermediate bromonium ring. Explain why in the case of the addition of one equivalent of Br_2 to ALKYNES (as shown below), it is different, and both the *syn* and *anti* addition products are produced. (8pts)



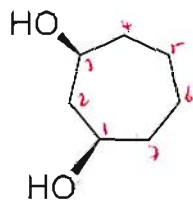
The Br^- can attack the cation either from the top or bottom, yielding the 2 products.

(TOO MUCH STRAIN & NOT FORMED)

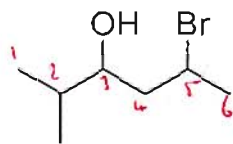


The sp^2 carbons will not tolerate the angle compression of the 3 membered ring.

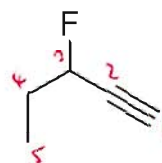
4) Name (in IUPAC form) the following three compounds. (12pts)



(Meso) *Syn*-1,3-cycloheptanediol

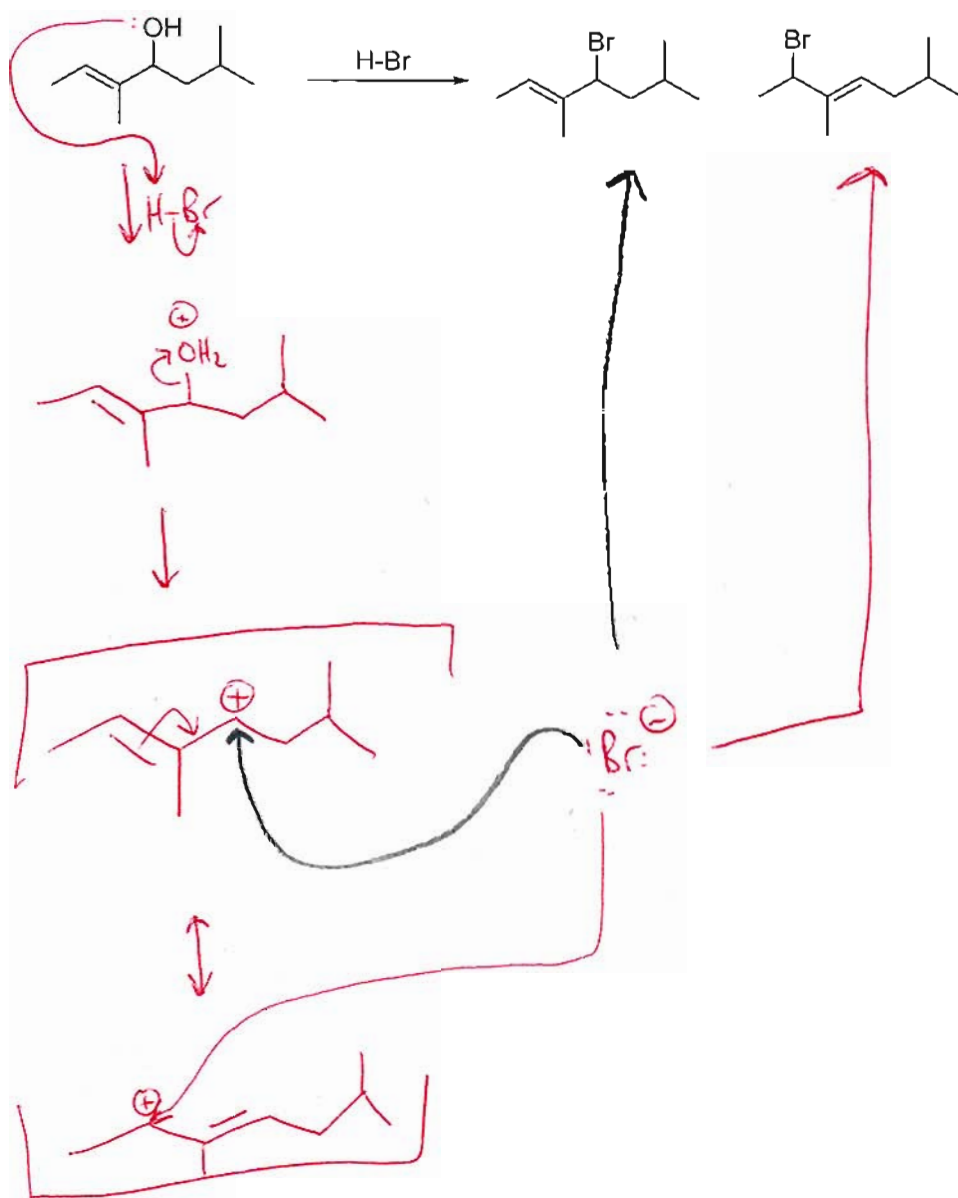


5-bromo-2-methyl-3-hexanol

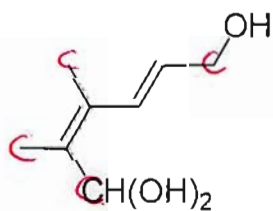


3-fluoro-1-pentyne

5) Explain the formation of both products in this substitution reaction. (12pts)

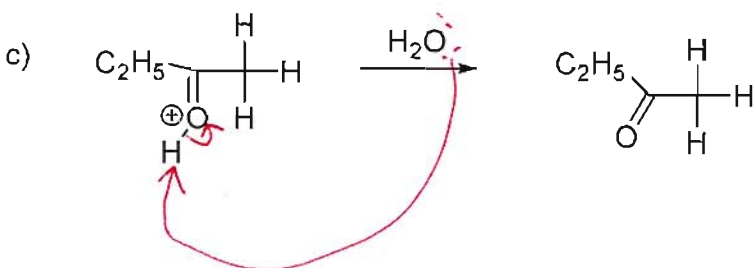
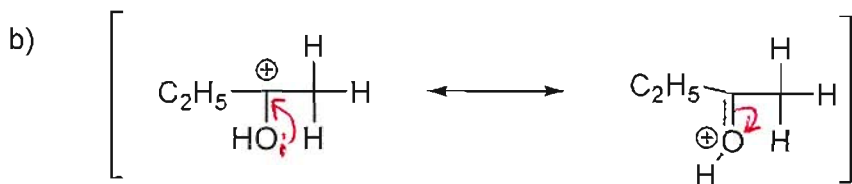
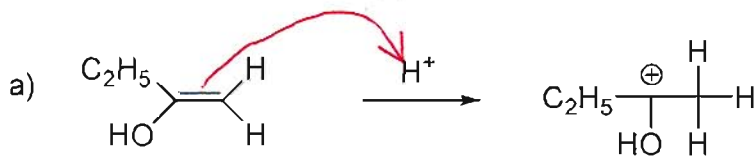


6) For the compound below, how many sp^3 hybridized carbon atoms are there? (2pts)

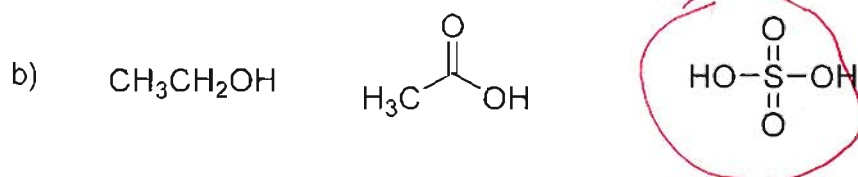


FOUR

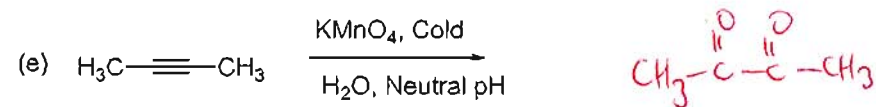
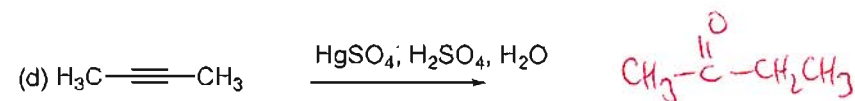
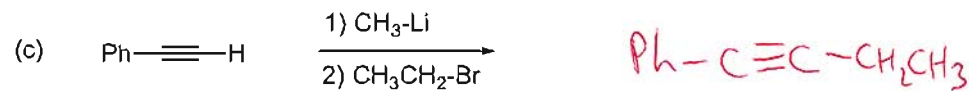
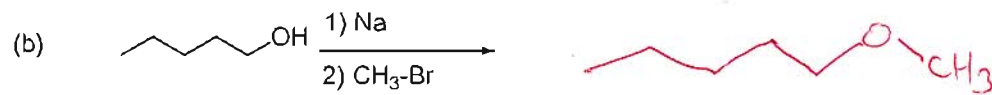
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