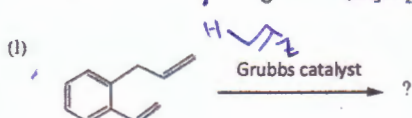
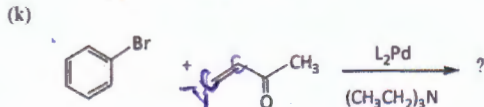
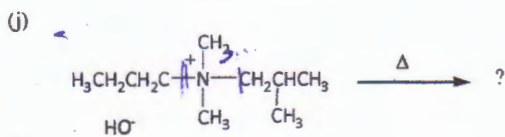
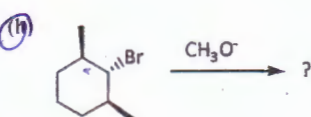
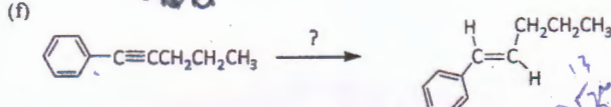
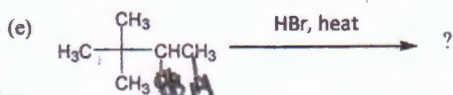
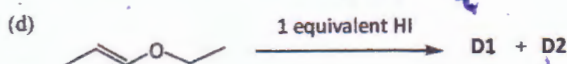
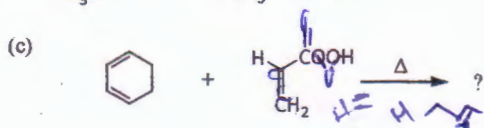
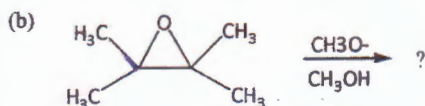
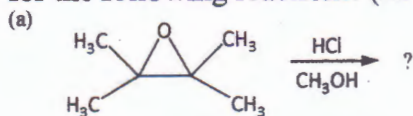


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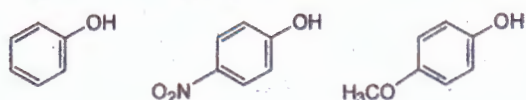
Final Exam

January 10, 2018

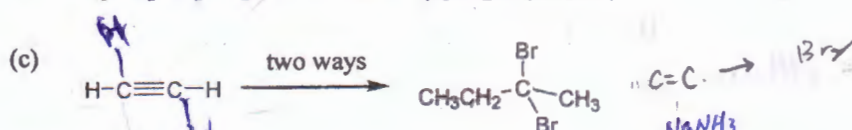
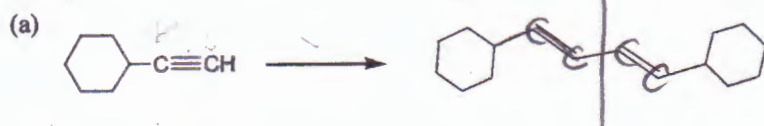
1. Predict the major product, if any, or provide appropriate starting materials, or reagent(s) for the following reactions. (26%)



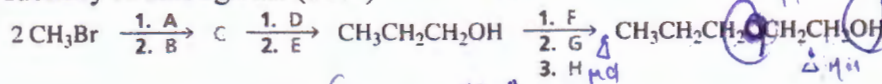
2. Rank the following compounds in an order of decreasing acid strength, and give a brief explanation. (6%)



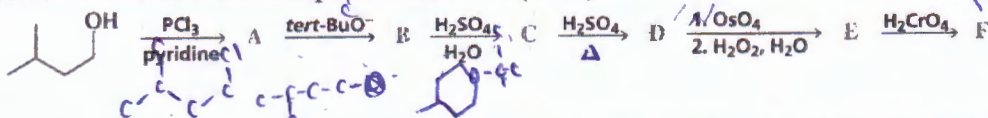
3. Show how you would synthesize the following compound, starting with the provided starting material. (48%)



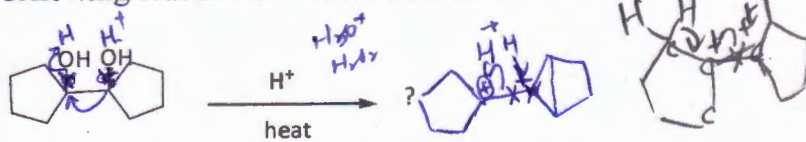
4. Identify A through H. (16%)



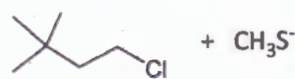
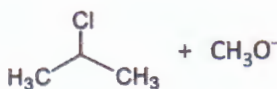
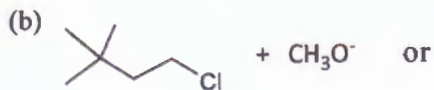
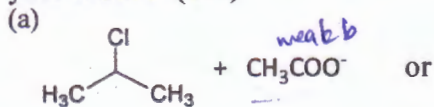
5. Draw structures for compounds A to F. (14%)



6. Predict the product for the following reaction and write a mechanism to explain how it is formed. (6%)



7. Which reaction in each of the following sets of reaction will give more $\text{S}_{\text{N}}2$ product? Give your reason. (8%)



Have a Nice Winter Break and Happy Lunar New Year!