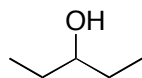


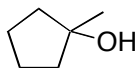
Consider the structures below to answer the following questions:



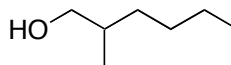
A



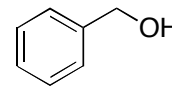
B



C



D



E

(1) Which would give a ketone when treated with aq.  $\text{H}_2\text{CrO}_4$ ?

A c,d	B a,c	C a,b	D d,e
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(2) Which could be formed by treatment of an appropriate electrophile with  $\text{MeMgBr}$ , followed by acidic workup.

A c only	B all	C a,c	D a,b,c
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(3) Which could be formed by treatment of a ketone or ester with  $\text{LiAlH}_4$ ?

A c,d	B a,b,d,e	C d,e	D all
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(4) Which can be converted to an aldehyde by  $\text{PCC}/\text{CH}_2\text{Cl}_2$  oxidation?

A c,d	B d,e	C a,b	D c only
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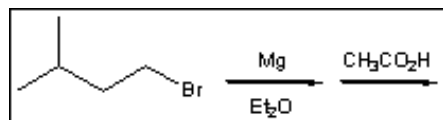
(5) Which can be oxidized by Jones reagent to a carboxylic acid?

A none	B a,b,d,e	C d,e	D all
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(6) Which will not be oxidized by Jones reagent?

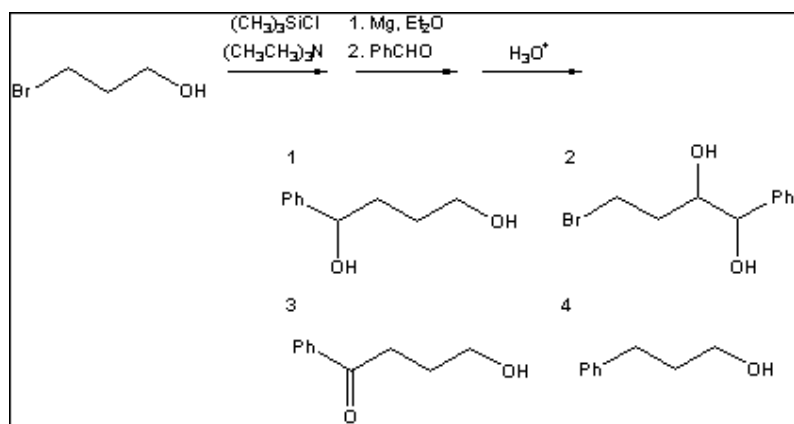
A c only	B all	C a,c	D a,b,c,d
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(7) What is the major organic product obtained from the following sequence of reactions?

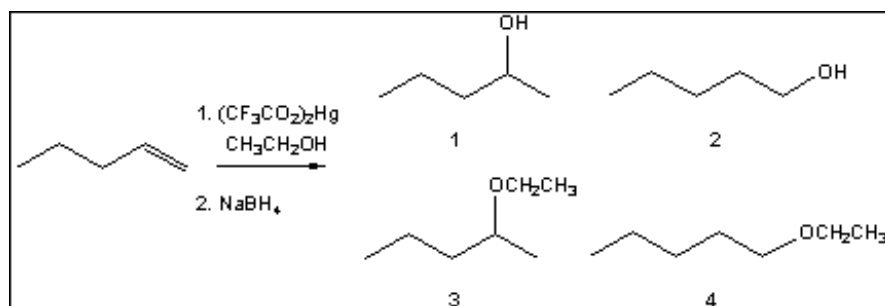


- a. 3-methyl-1-butanol  
 b. 3-methyl-2-butanol  
 c. 2-methylbutane  
 d. 3-methyl-2-butene

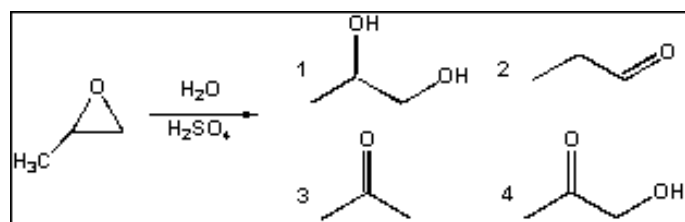
(8) What is the major organic product obtained from the following sequence of reactions?



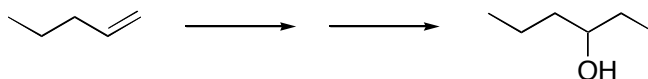
(9) What is the major organic product obtained from the following reaction?



(10) What is the major organic product obtained from the following reaction?

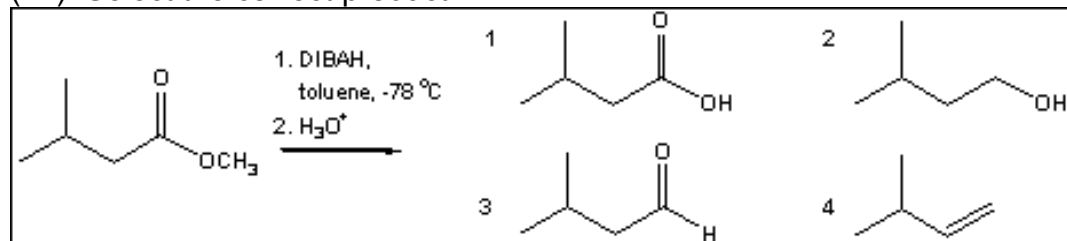


(11) What would be a method for performing the following transformation?

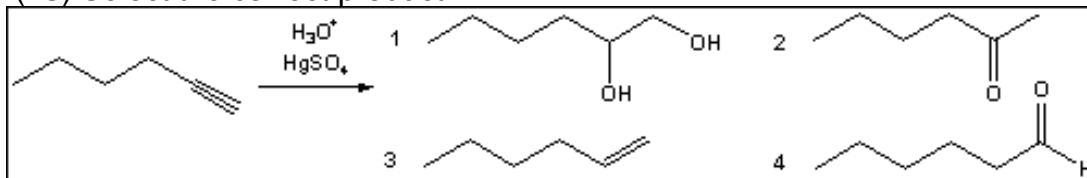


<b>A</b> 1) POCl <sub>3</sub> 2) Me <sub>2</sub> CuLi	<b>B</b> 1) H <sub>3</sub> O <sup>+</sup> 2) MeMgBr	<b>C</b> 1) mCPBA 2) MeMgBr 3) H <sup>+</sup>	<b>D</b> 1) H <sub>2</sub> CrO <sub>4</sub> 2) MeMgBr
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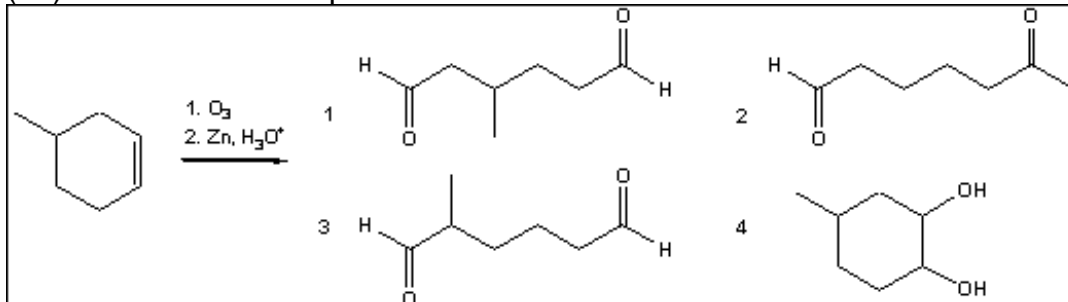
(12) Select the correct product.



(13) Select the correct product.



(14) Select the correct product.



(15) Select the correct product.

