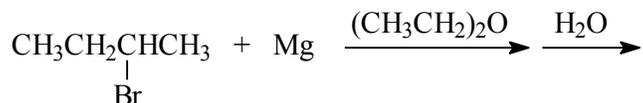


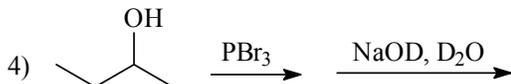
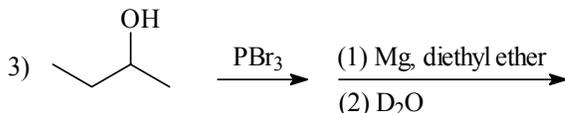
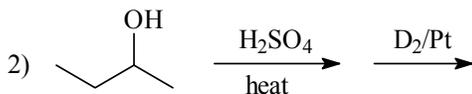
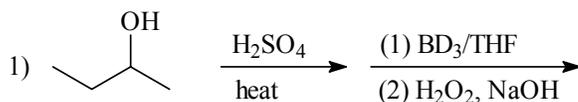
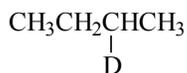
1. What are the products of the following sequence of reactions?



- 1) 2-butanol and Mg(OH)Br
 - 2) 2-butanol and MgHBr
 - 3) butane and Mg(OH)Br
 - 4) butane and MgHBr
2. Arrange the following in order of decreasing basicity (most basic first).

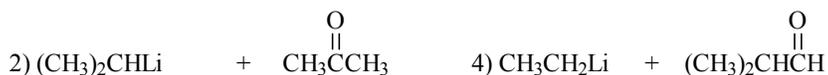


- 1) A>B>C
 - 2) A>C>B
 - 3) C>B>A
 - 4) B>A>C
3. Which of the following reaction sequences would convert 2-butanol into the deuterated compound below?



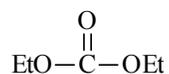
- 1) 1
 - 2) 2
 - 3) 3
 - 4) 4
4. The reaction of phenylmagnesium bromide ($\text{C}_6\text{H}_5\text{MgBr}$) with propanal ($\text{CH}_3\text{CH}_2\text{CH}=\text{O}$), followed by hydrolysis yields:
- 1) 2-phenyl-1-propanol
 - 2) 1-phenyl-1-propanol
 - 3) 2-phenyl-2-propanol
 - 4) 3-phenyl-1-propanol

5. Which of the following pairs of reagents would you use to prepare 4-methyl-2-pentanol?



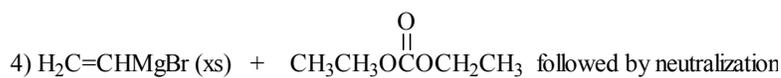
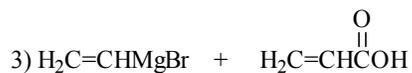
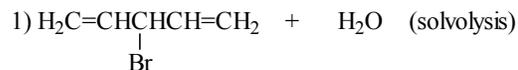
- 1) 1 2) 2 3) 3 4) 4

6. Reaction of excess Grignard reagent with diethyl carbonate, shown below, gives a(n):



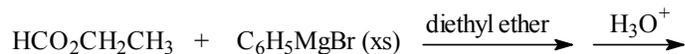
- 1) ketone 2) tertiary alcohol
3) secondary alcohol 4) ester

7. Which of the reaction schemes below gives 1,4-pentadien-3-ol, $\text{H}_2\text{C}=\text{CHCH}(\text{OH})\text{CH}=\text{CH}_2$ as the major organic product and with minimal byproduct formation?



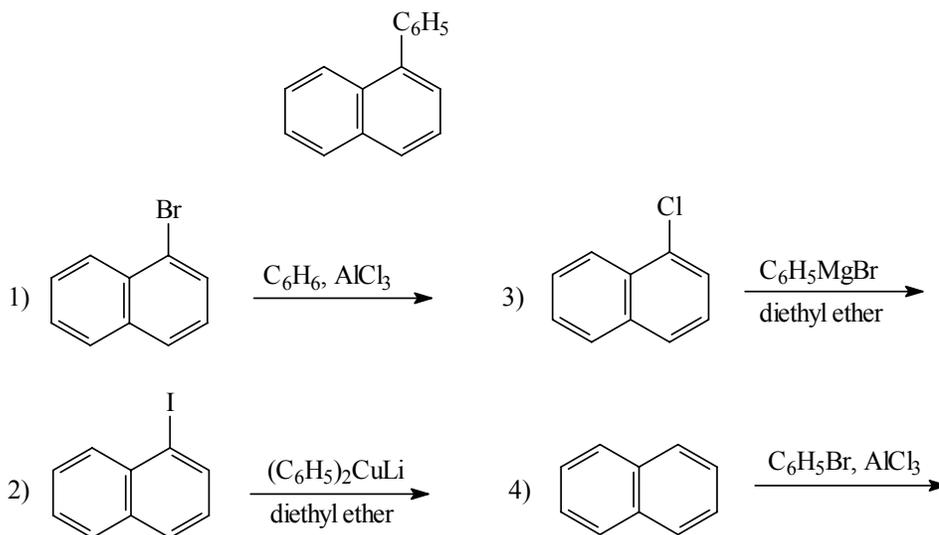
- 1) 1 2) 2 3) 3 4) 4

8. Which of the following is the product of the reaction below?



- 1) $(\text{C}_6\text{H}_5)_3\text{COH}$ 2) $(\text{C}_6\text{H}_5)_2\text{CHOH}$ 3) $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$ 4) $(\text{C}_6\text{H}_5)_3\text{CH}$

10. 1-Phenyl-naphthalene, shown below, can be prepared in over 80% yield by one of the reactions below. Which one?

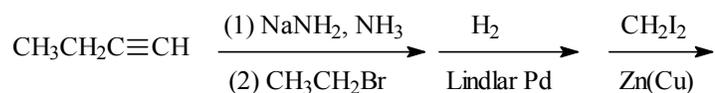


- 1) 1 2) 2 3) 3 4) 4

11. The reaction of *cis*-2-butene with CH_2I_2 and $\text{Zn}(\text{Cu})$ to give *cis*-1,2-dimethylcyclopropane is a(n):

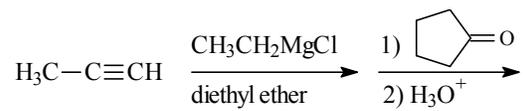
- 1) enantiospecific reaction
- 2) diastereoselective reaction
- 3) stereospecific reaction
- 4) regioselective reaction

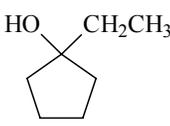
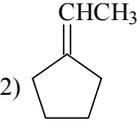
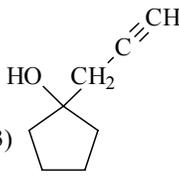
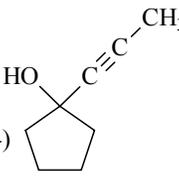
12. What is the product of the following sequence of reactions?



- 1) 1,1-diethylcyclopropane
 - 2) *trans*-1,2-diethylcyclopropane
 - 3) *cis*-1,2-diethylcyclopropane
 - 4) *cis* and *trans*-1,1-diodo-2,3-diethylcyclopropane
13. A Ziegler-Natta catalyst, such as $\text{TiCl}_4/\text{Al}(\text{CH}_2\text{CH}_3)_3$, is used for the preparation of:
- 1) polyethylene
 - 2) cyclopropanes
 - 3) alcohols
 - 4) carbenes or carbenoids

14. Which of the following is the major organic product in the reaction sequence below?



- 1)  1) 1
- 2)  2) 2
- 3)  3) 3
- 4)  4) 4

Answer Key for Test "211c14q2.tst", 12/29/2003

No. in No. on

Q-Bank Test Correct Answer

14	2	1	3
14	4	2	1
14	6	3	3
14	8	4	2
14	10	5	1
14	12	6	2
14	14	7	2
14	16	8	2
14	18	9	2
14	20	10	2
14	22	11	3
14	24	12	3
14	26	13	1
14	28	14	4