Chapter 17 Worksheet – Reactions of Alcohols

I. Draw the product of the reaction between each carbonyl (17-1 through 17-6) with reagents (a) through (f).

(a) 1. NaBH₄  
2. H₃O⁺  
(b) 1. LiAlH₄  
2. H₃O⁺  
(c) 1. CH₃MgBr  
2. H₃O⁺  
(d) 1. PhMgBr  
2. H₃O⁺  
(e) 1. MgBr  
2. H₃O⁺  
(f) 1. MgBr  
2. H₃O⁺  

II. Draw the product of the reaction between each alcohol (17-7 through 17-13) with reagents (g) through (n). Keep in mind that the substitution pattern of the alcohol (primary, secondary, tertiary) can make a difference in products and/or the reaction may not occur.

(g) H₂SO₄, Δ  
(h) POCl₃, py  
(i) DMP  
(j) CrO₃, H₃O⁺  
(k) HBr  
(l) PBr₃  
(m) SOCl₂  
(n) H⁺  

III. Draw the arrow-pushing mechanisms for the following:
17-1 (a) & (c)  
17-3 (b) and (d)  
17-7 (g)  
17-7 (l)