ProtonGuru
Positive Chemistry Experiences

Video Practice for Topic I.6:

Hybridization, Sigma and Pi Bonds, Lone Pairs and Bond Geometry

Recommended reading for this topic:

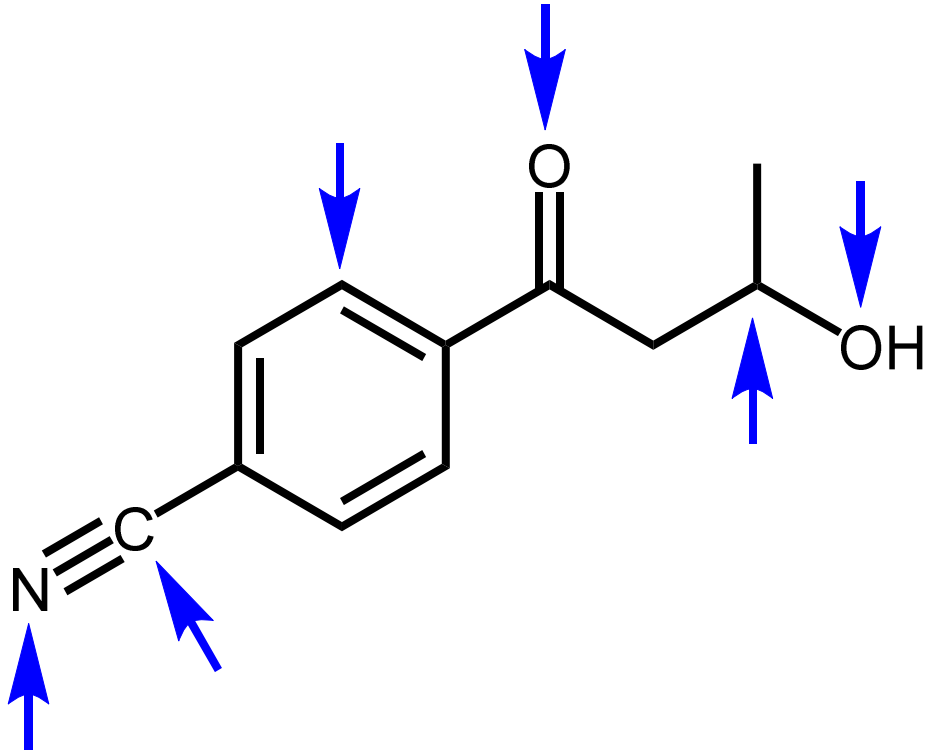
Lesson I.6 in *Organic Chemistry 1 Primer 2018*,
by Rhett C. Smith, Andrew G. Tennyson and Tania Houjeiry

Additional Videos and how to match videos to your course text book:

ProtonGuru.com

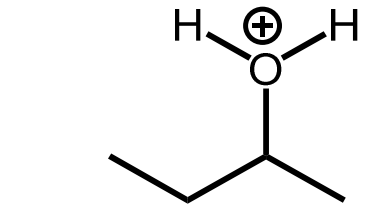
Hybridization, Bonds, Lone Pairs and Geometry

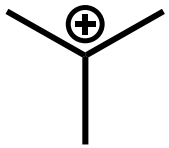
Provide the hybridization label for each indicated atom:

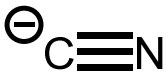


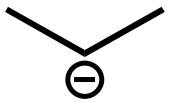
Hybridization, Bonds, Lone Pairs and Geometry

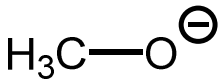
Provide the hybridization label for each charged atom in the structures below.

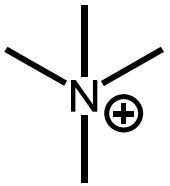


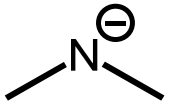






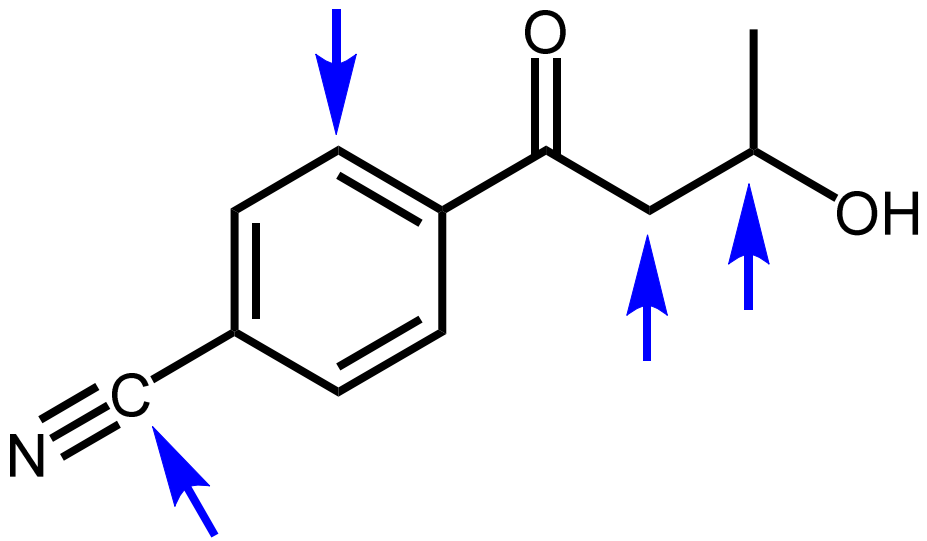






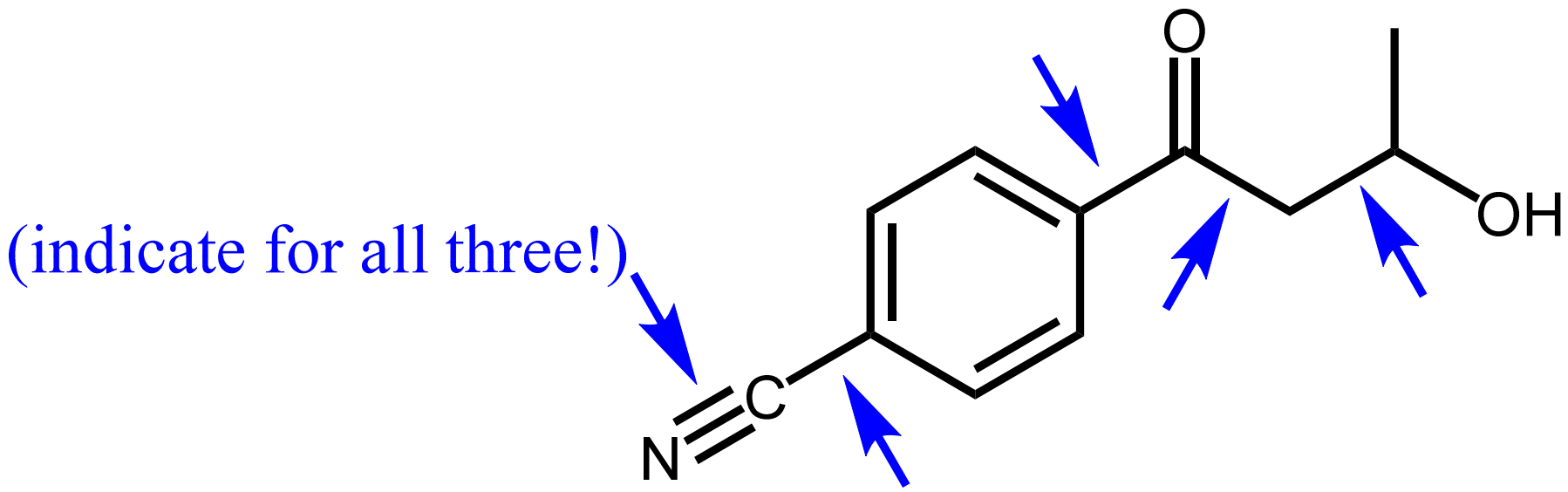
Hybridization, Bonds, Lone Pairs and Geometry

Provide the molecular geometry about each indicated atom:



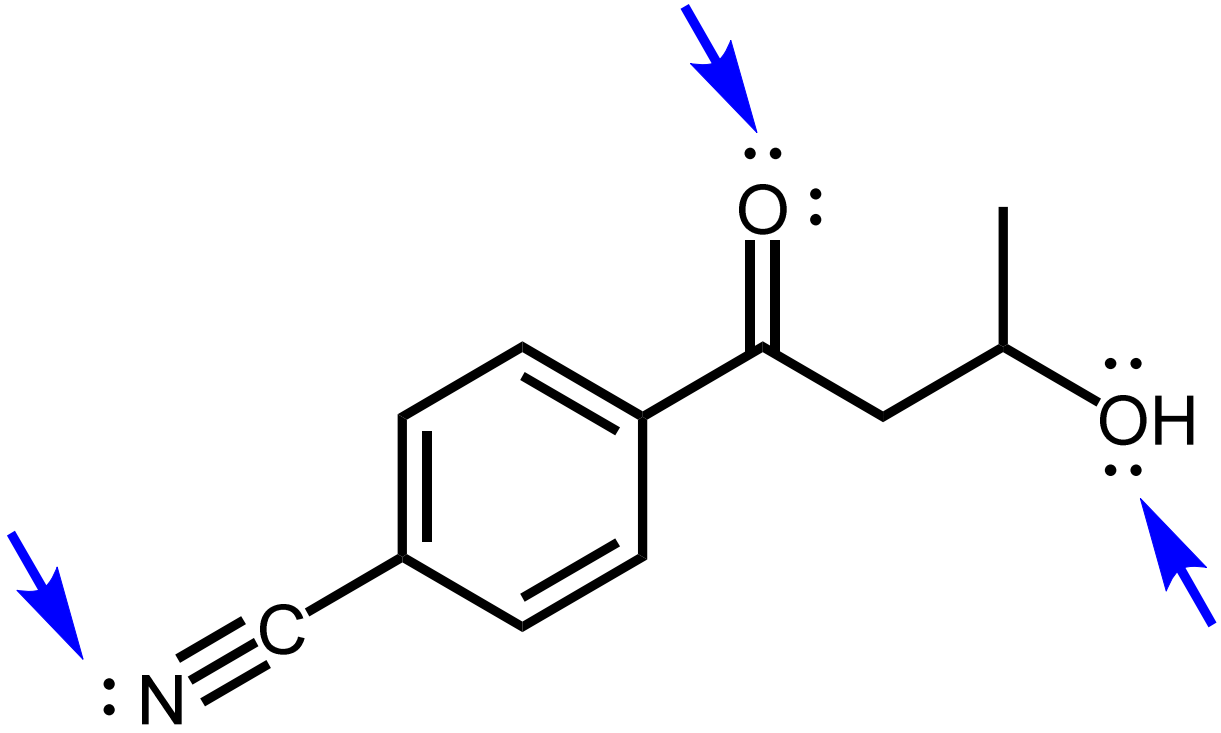
Hybridization, Bonds, Lone Pairs and Geometry

Which orbitals overlap to form each indicated bond below?



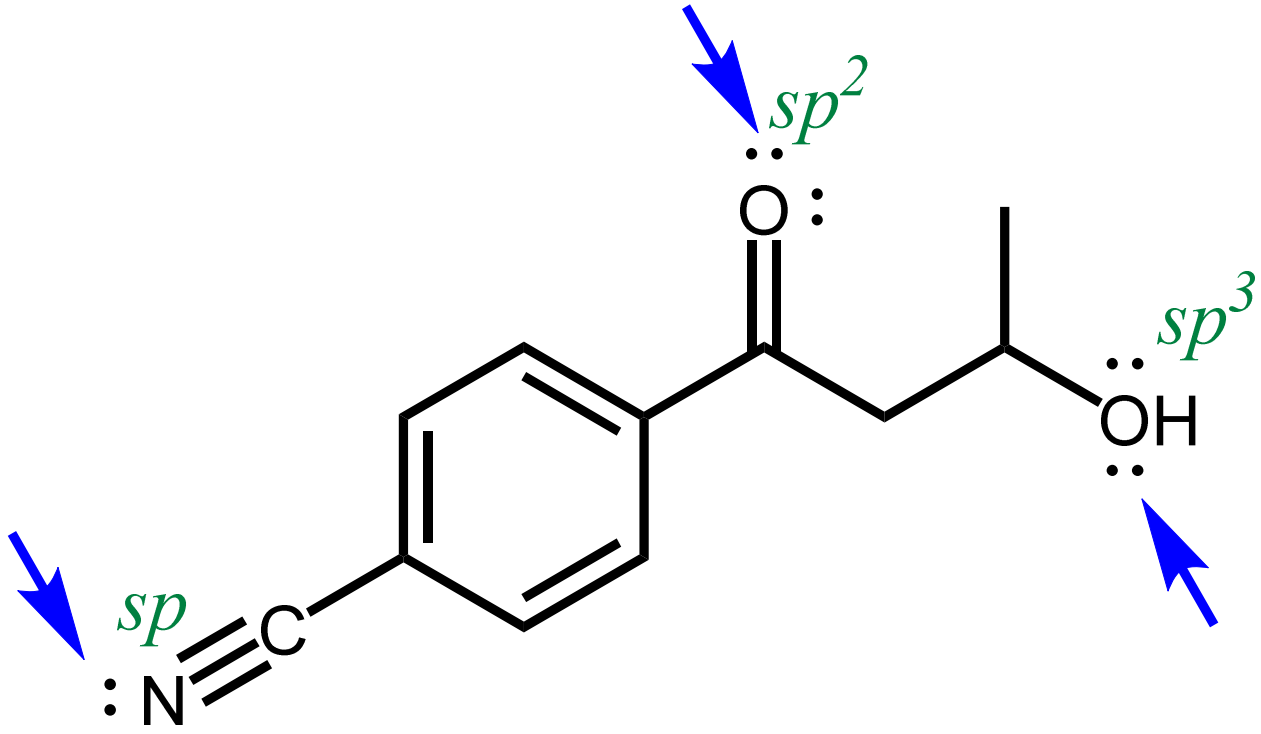
Hybridization, Bonds, Lone Pairs and Geometry

What type of orbital holds each of the indicated nonbonding pairs of electrons?



Hybridization, Bonds, Lone Pairs and Geometry

The hybrid orbitals hold the lone pairs, so this is all we need to do!



Hybridization, Bonds, Lone Pairs and Geometry

Provide an approximate value for each of the bond angles. The arrow points to the central atom of the angle in each case.