

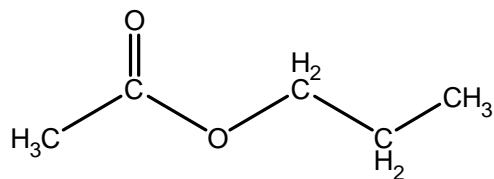


1. [60 points maximum] For each of the following structures or names, give an IUPAC name or draw the correct structure (**including all atoms**), as required.

(a) Phenol

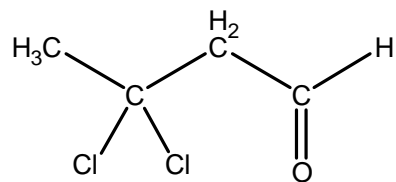
(b) *iso*-butyl methyl ether

(c)



/30

(d)

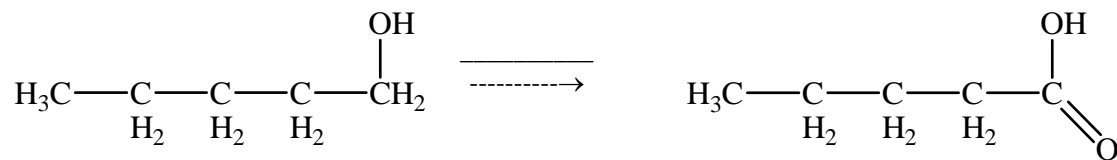


(e) Acetic Acid

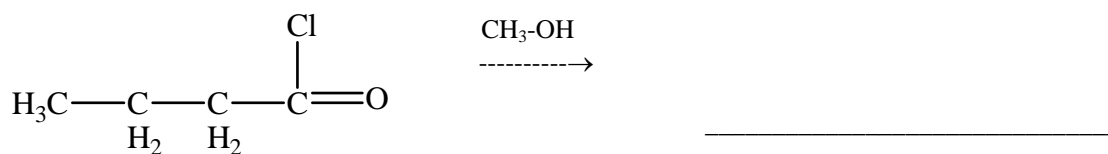
(f) Threonine

2. [90 points maximum] For each of the following reactions, fill in the correct product (clearly indicating all atoms around the reacting centers).

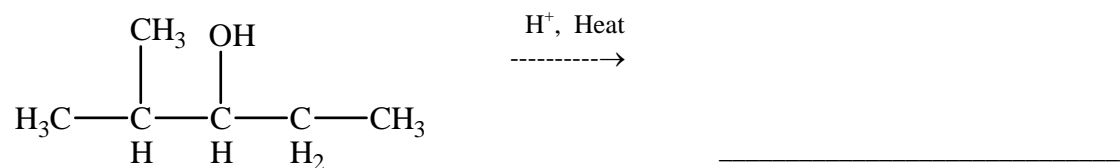
(a)



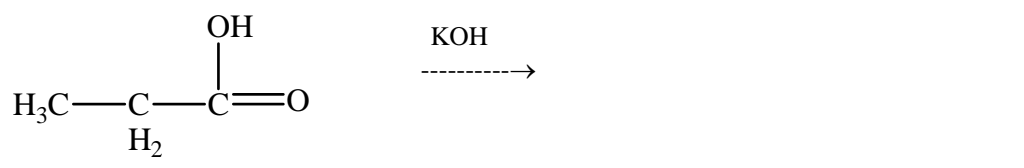
(b)



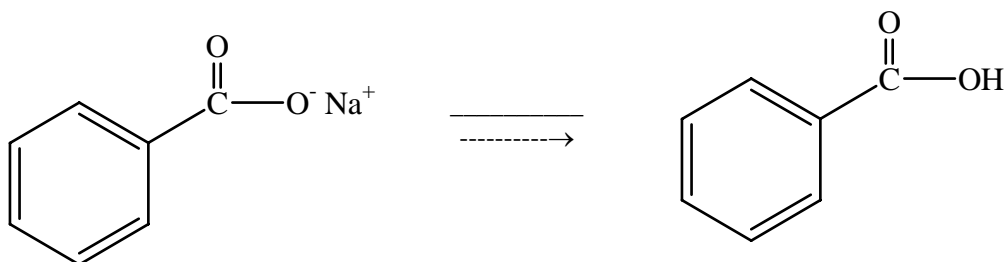
(c)



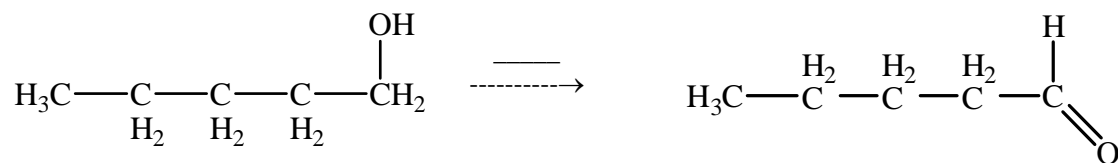
(d)



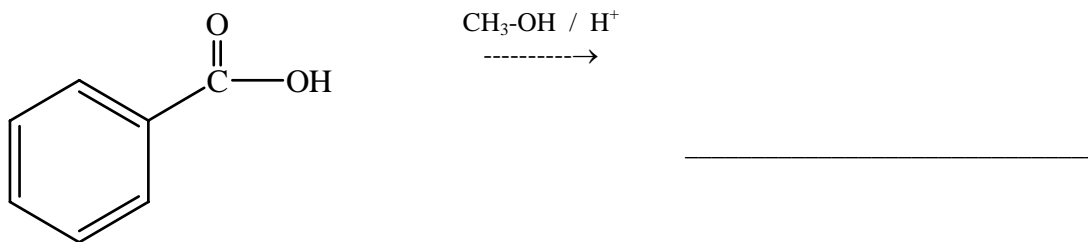
(e)



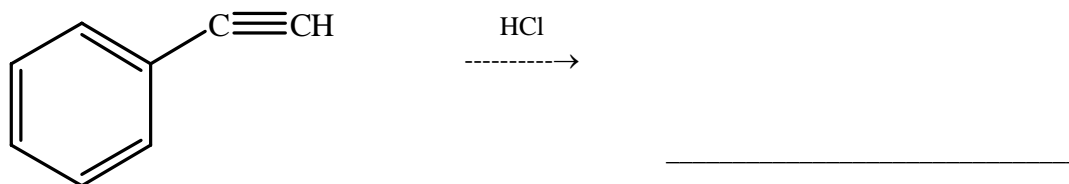
(f)



(g)



(h)



(i)

