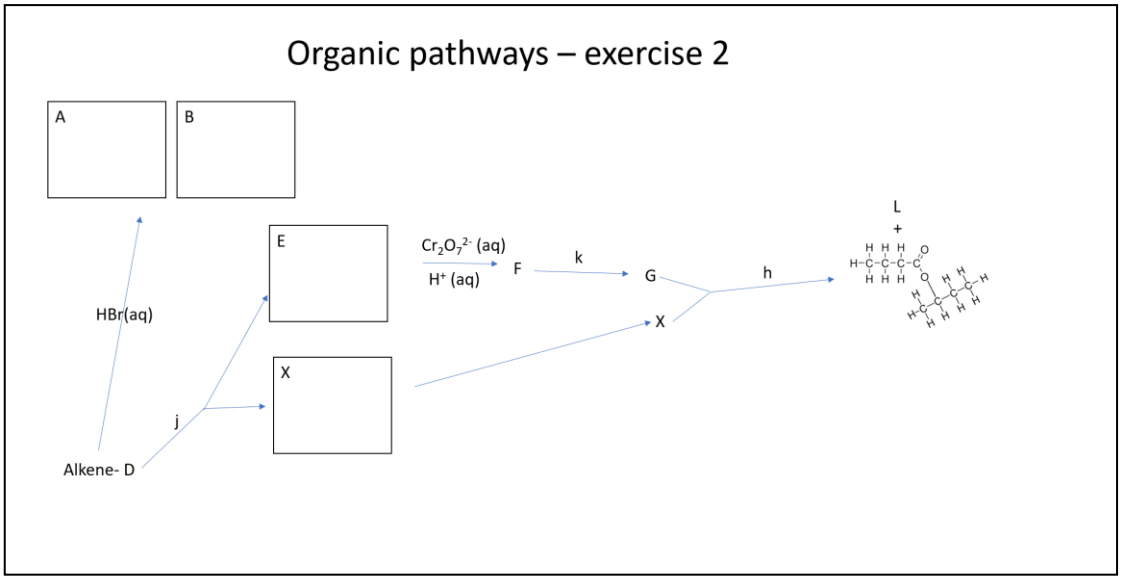
Video worksheet- organic pathways – exercise 2.



1. Consider the pathways shown above. Using these pathways answer the following questions.
   a. Name the following compounds
      - A _____
      - B _____
      - E _____
      - X _____
      - G _____
      - D _____
      - L _____
   b. Draw the structural formula of X.
      i. to what class of compounds does F belong to? _____
      ii. to what class of compounds does G belong to? _____
   c. Identify the reagents below:
      i. "j". _____
      iii "h". _____
   d. Identify "k" by placing a circle around the most likely option.
      MnO_4^-(aq)/H^+(aq), H_2O(g)/H_3PO_4(s), HCl(aq), NaOH(aq)
   e. Identify the type of reaction that forms:
      i. E _____
      ii. J _____
      iii. K _____
   f. Consider the formation of substance F.
      i. Give the oxidation and reduction half equations for the reactions taking place in the formation of substance F given that $Cr_2 7_4^{2-}$ (aq) → Cr^{3+}(aq)

      ii. Give the balanced overall equation, states included.