CARBOXYLIC ACIDS: CONVERSION TO ACYL CHLORIDES

There are three commonly described ways of converting carboxylic acids into acyl chlorides. Before you try these questions, check you syllabus and past papers to see which you need to know. It is pointless wasting time on stuff you don't need.

1. a) Acyl chlorides are produced by replacing the -OH group in a carboxylic acid by a chlorine atom. Draw the fully displayed structural formula for propanoyl chloride.

   b) Write equations for the preparation of ethanoyl chloride by reactions of ethanoic acid with

      (i) phosphorus(V) chloride

      (ii) phosphorus(III) chloride

      (iii) sulphur dichloride oxide (thionyl chloride)

   c) Whichever of these methods you use, how would you separate the ethanoyl chloride from the reaction mixture?