# Chemguide - answers

#### **ACYL CHLORIDES: PREPARATION**

## 1. Choose any two of the following:

#### Using phosphorus(V) chloride: PCl<sub>5</sub>

$$CH_3COOH + PCl_5$$
  $\longrightarrow$   $CH_3COCl + POCl_3 + HCl$ 

Separate by fractional distillation.

### Using phosphorus(III) chloride: PCl<sub>3</sub>

$$3CH_3COOH + PCl_3 \longrightarrow 3CH_3COCl + H_3PO_3$$

Separate by fractional distillation.

## Using sulphur dichloride oxide (thionyl chloride): SOCl<sub>2</sub>

Separate by fractional distillation.

There is nothing to understand here – some things you just have to know!