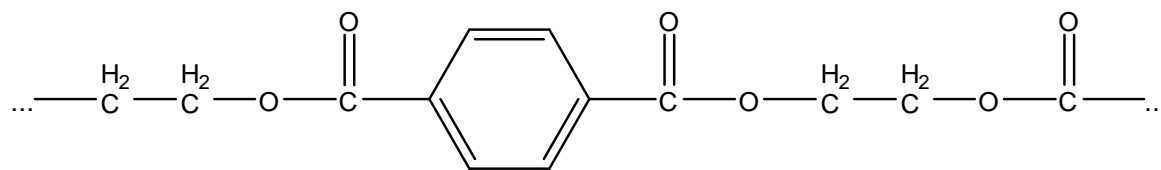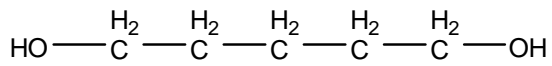**Question One-** Terylene (Dacron) is a **polyester** and a **condensation polymer**, a section of which is shown below:

a) Explain the meaning of the words in bold
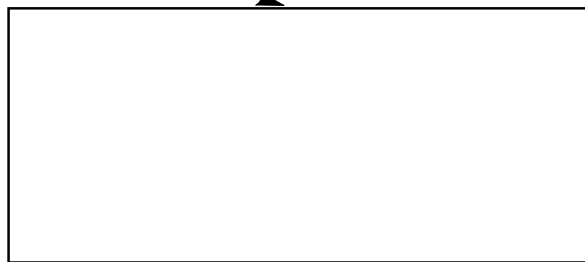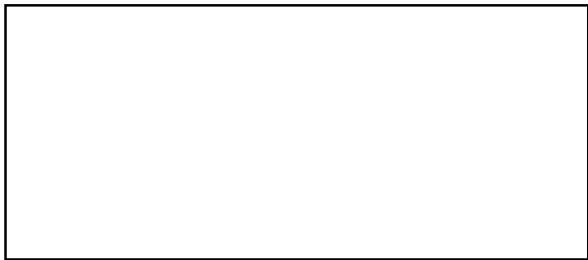
b) Draw the structural formulae of two monomers from which this polymer could be prepared.

Question Two- Give the structures of the monomers used in the formation of "Terylene". State the type of polymerisation occurring in the preparation of terylene and give the repeating unit (circle on the diagram above) and give two methods for preparation of such polymer in the laboratory
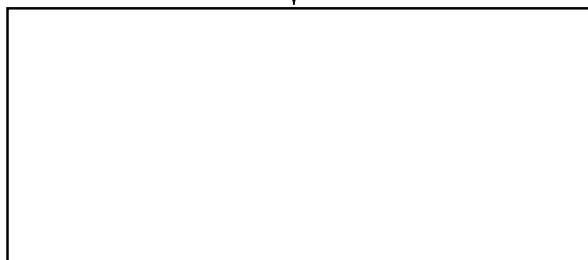
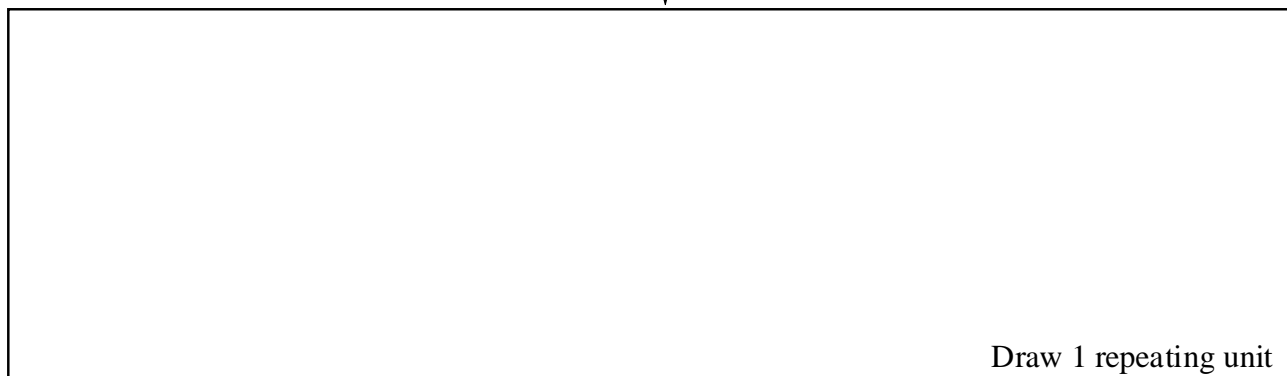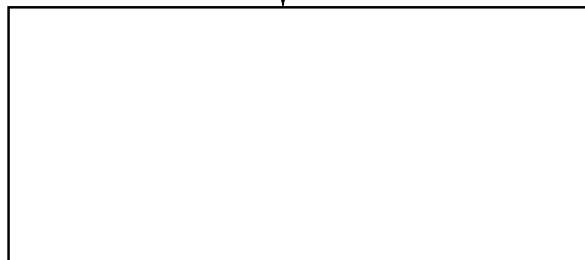$$HO-\overset{\overset{\text{H}_2}{|}}{C}-\overset{\overset{\text{H}_2}{|}}{C}-\overset{\overset{\text{H}_2}{|}}{C}-\overset{\overset{\text{H}_2}{|}}{C}-\overset{\overset{\text{H}_2}{|}}{C}-OH$$

$KMnO_4/H^+$
Reflux

PCl_5

$NH_3 \text{ (g)}$

PCl_5

Draw 1 repeating unit

+