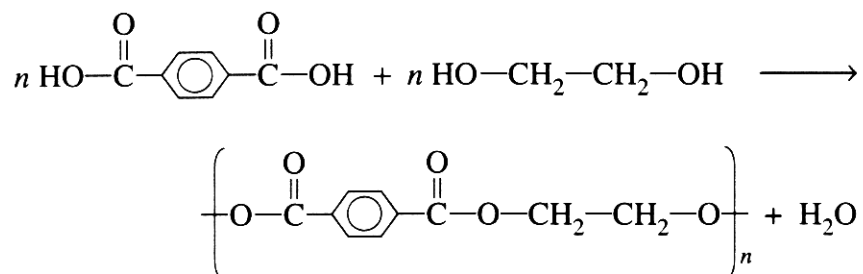


Question 18 (6 marks)

(a) Name the type of polymerisation shown in the following reaction:

1



condensation polymerisation

(b) Assess current developments in the use of biopolymers.

5

The current use of biopolymers is quite extensive, yet could be improved. Ethanol could be used more widely. It is good as a petrol extender in concentrations of up to 10% as engine modifications are not needed. It also enhances octane and improves emission quality. If the large scale fermentation of sugars could be improved so that such large areas of land were not needed, and so much smelly waste not produced, this would be better for the environment. It would decrease our reliance on fossil fuels as crude oil would not need to be used as a source of ethene. ~~But~~ Biopolymers have started to be more widely used as fuels, and due to their suitable carbon chain structure, can be used as a starting molecule for petrochemicals. Although overall advancements in this area have been made, more could be done to promote biopolymer use.