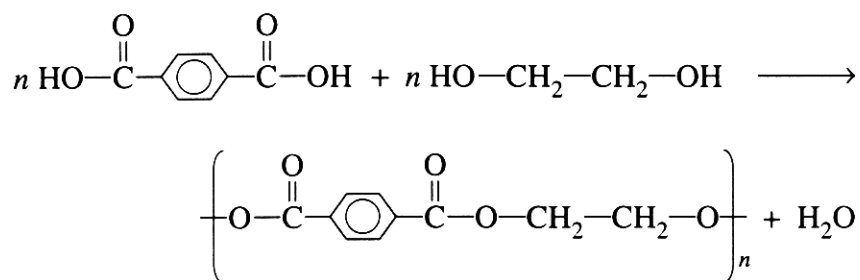


Question 18 (6 marks)

(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 developments in the use of biopolymers include the extraction of carbon-based compounds from natural sources in order to produce polymers. An example of this is the making rayon, from the extraction of cellulose from woody plants and trees. A syrupy substance ~~viscose~~ is made which is pushed through holes into sulphuric acid ^{to make fibres of the polymer which} and can then be spun or woven to make cloth and fabrics. This is an example of a biopolymer which is used heavily in the fabric industry. Skirts and slacks can be made from this substance which is renewable and doesn't use fossil fuels, which helps the environment and saves use of fossil fuels for other needs. Other current developments are the creation of biopolymers which biodegrade quicker in their environment with the introduction of certain bacteria. This reduces the time they sit in landfill after use and means they reduce our problems with waste. Further development and introduction of these biopolymers could greatly improve our waste situation.