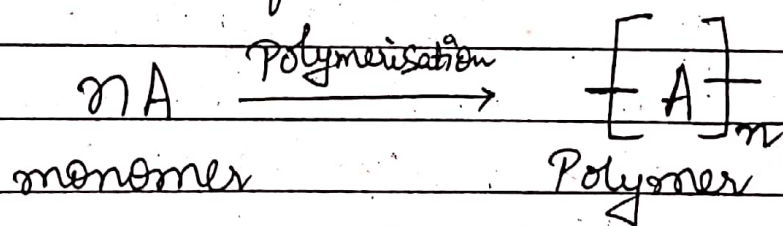


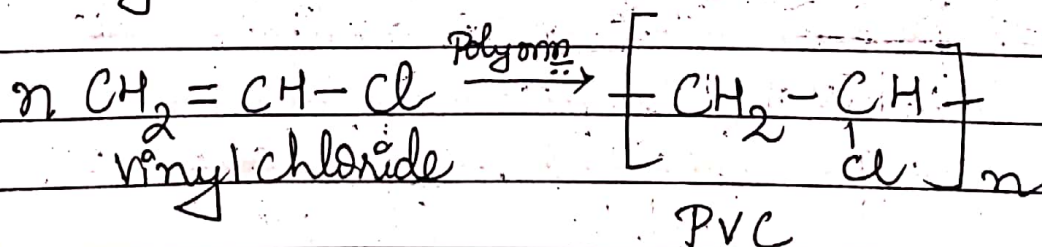
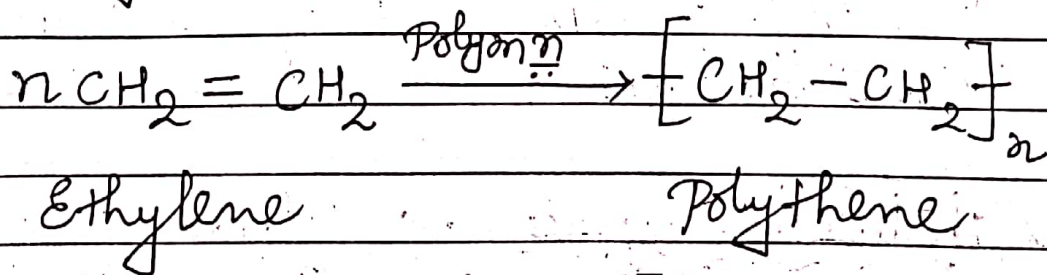
(2) Synthetic Polymers → Man-made/laboratory synthesised polymers are called synthetic polymers.
E.g; Polythene, Polyvinylchloride (PVC), Bakelite, Polyester, Nylon etc.

(B) On the basis of nature of repeating units, Polymers are classified as -

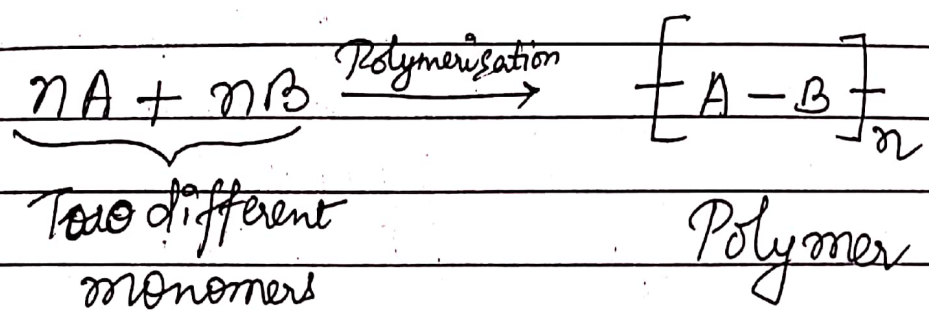
(1) Homopolymers → Homopolymers are those polymers which are produced by polymerisation of only one type of monomers.



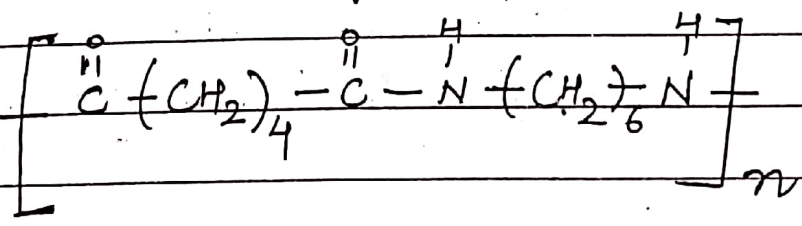
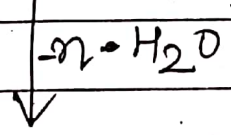
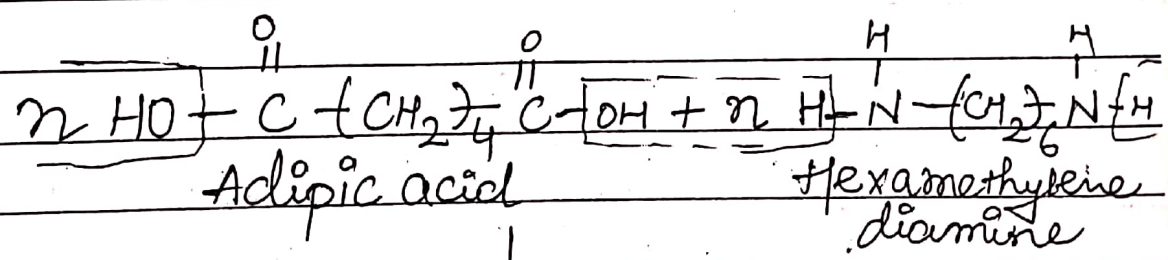
Polymers like polythene, PVC, Polyacrylonitrile (PAN), Teflon etc. have same repeating monomeric units.



(2) Co-Polymers → Copolymers are those polymers which are produced by repetition of two or more different monomeric units.



Bakelite, Polyester, Nylon-6,6 etc. are Copolymers. These polymers have two different repeating units.

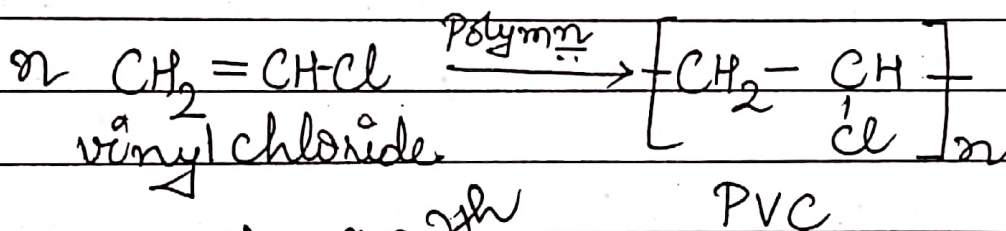
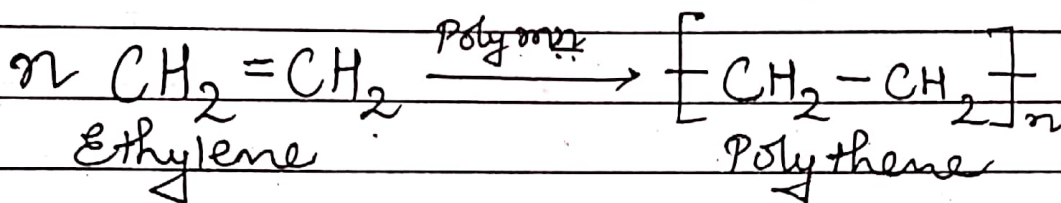


Nylon-6,6

(C) On the basis of chemical reaction during polymerisation process, polymers are classified as -

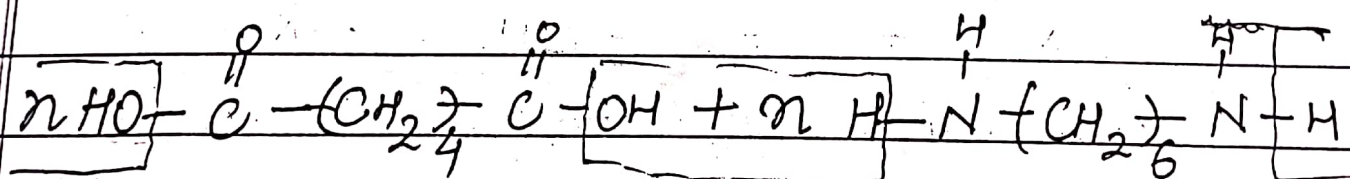
chain growth

(1) Addition Polymers → When 'n' molecules of monomers combine to give a large polymeric molecule without removal of any other simple molecules, the polymer obtained is called addition polymer and the process of combination is called addition polymerisation.
E.g; Polythene, PVC, PAN, Teflon etc.



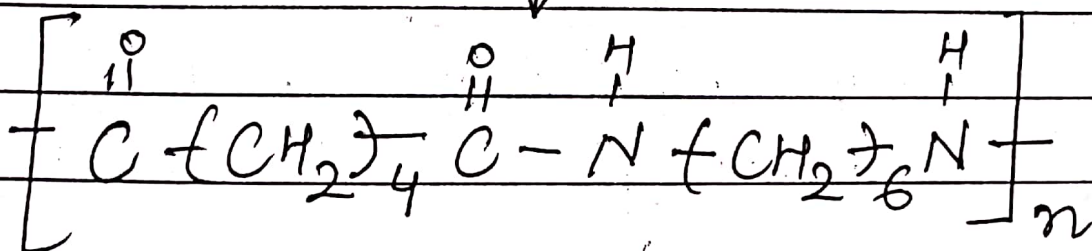
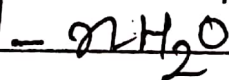
step growth

(2) Condensation Polymer :- When "n" molecules of two or more same or different monomers combine to give a polymeric molecule by elimination of simple molecules like H_2O , NH_3 , $\text{C}_2\text{H}_5\text{OH}$ etc. The Polymerisation reaction is called Condensation polymerisation and the polymeric product obtained is known as Condensation Polymer.
E.g; Polyester, Bakelite, Nylon-6,6 etc.



Adipic acid

Hexamethylene diamine



Nylon - 6,6