

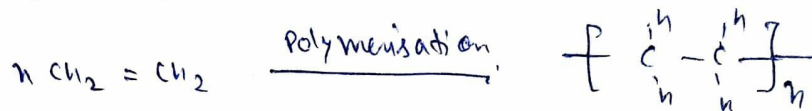
# POLYMERS

(Poly = many mer = unit)

Polymers are high mol. wt. comds composed of monomers.

Mol. wt of polymers ranges from 20,000 to 2,50,000.

"Conversion of monomer to polymer is called as polymerisation."



Polymers can be divided generally into two ~~steps~~ types -

- 1- Condensation polymers      2. Addition polymers

## Addition polymers

These polymers are formed by successive addition of the monomer units without elimination of any molecule. These additions are chain reactions and hence this mode of polymerisation is called chain

polymerisation and polymers are called chain-growth polymers.

EX - PVC, Teflon, Saran, PAN etc.

## Condensation polymers

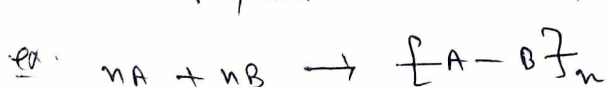
These polymers are formed by condensation between monomers with elimination of small molecules such as water and alcohol.

The polymer is formed by several successive condensation, the process is called step polymerisation and the polymer is known as step growth

polymer. EX - Polyester, Polyamides etc.

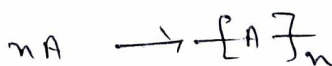
"Copolymer" and Homo-Polymer

Copolymers are produced by polymerising two or more different monomers.



Copolymer

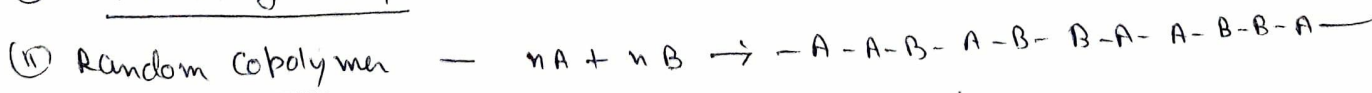
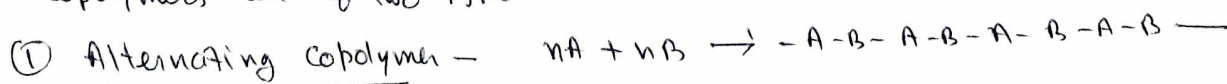
↳ ex-Rubber



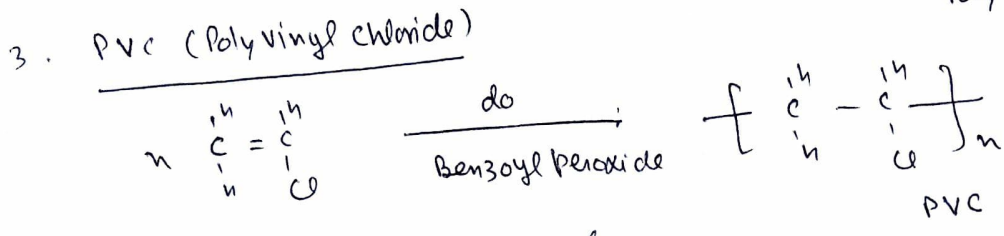
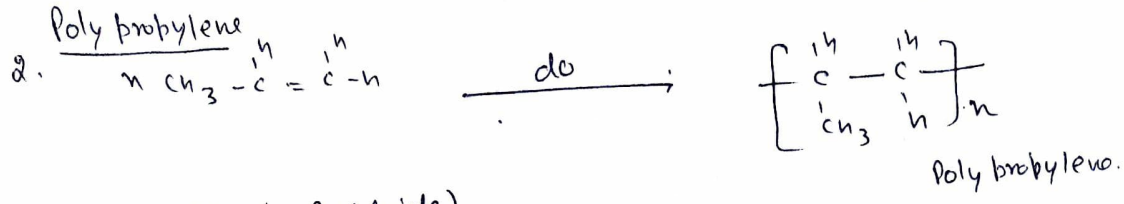
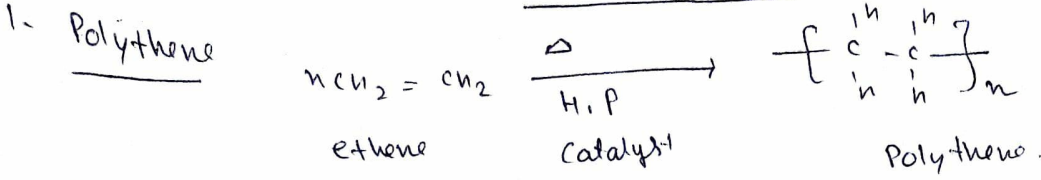
Homopolymer

↳ ex- addition polymers.

Copolymers are of two type -

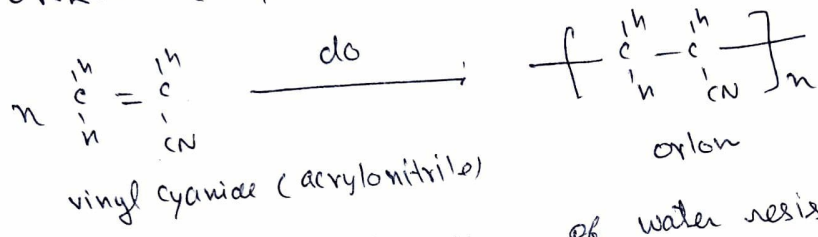


### Addition Polymers

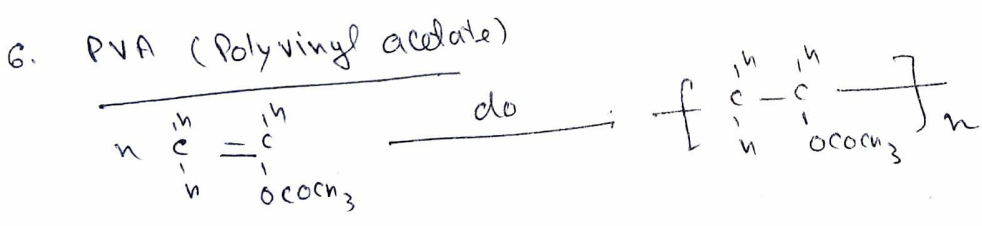
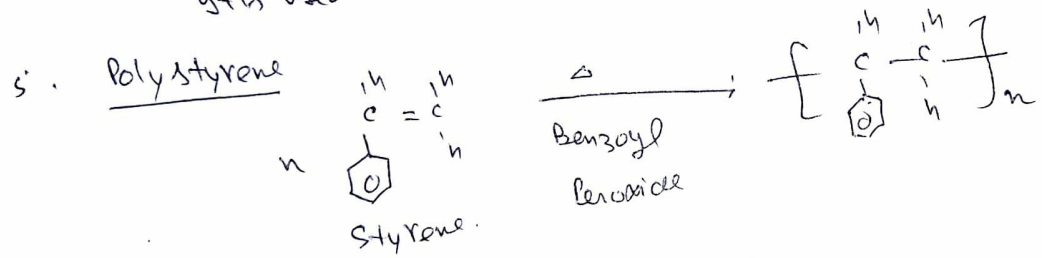


It is used in making coating of cable wires, gramophone records, shoe soles, plastic dolls etc.

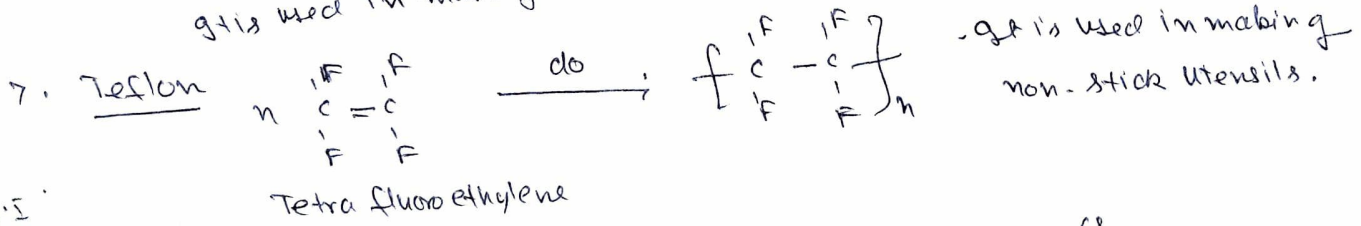
m.i. 4. ORLON (Polyacrylonitrile PAN) = Polyvinyl Cyanide.



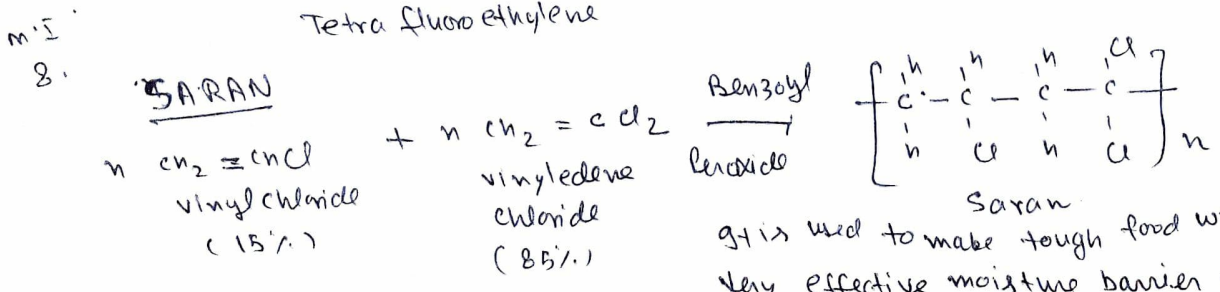
It is used in formation of water resistant quick drying fibres.



It is used in making plastic emulsion paints, adhesives.



It is used in making non-stick utensils.



It is used to make tough food wrap that is very effective moisture barrier.