

For B.Sc II Hons. Group (c)

POLYMERS

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B. Sc II (Hons)

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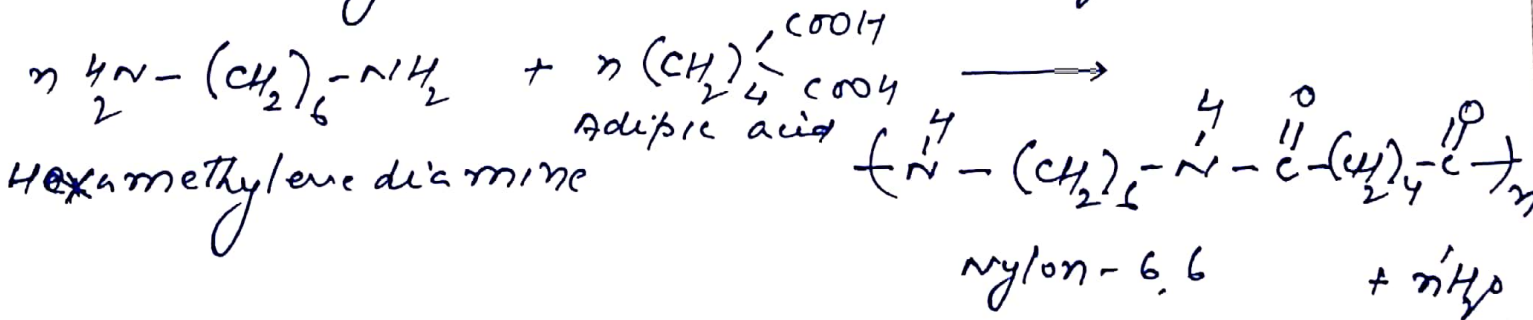
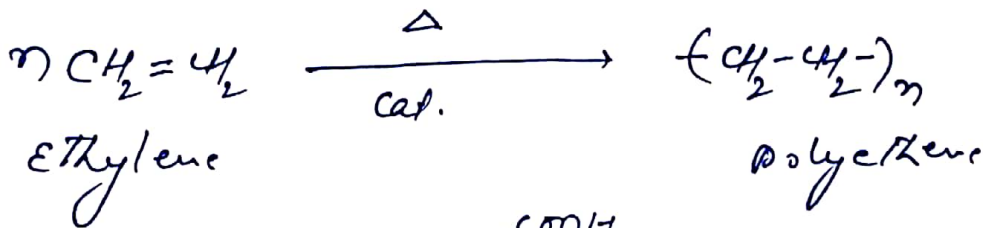
Group c (Organic Chem.)

H.O.D. Chemistry

4. Brief Idea of polymers

POLYMER

It is high molecular weight substance which is obtained by chemical combination of a large number of monomers



The process of the conversion of monomer into polymer is called polymerisation.

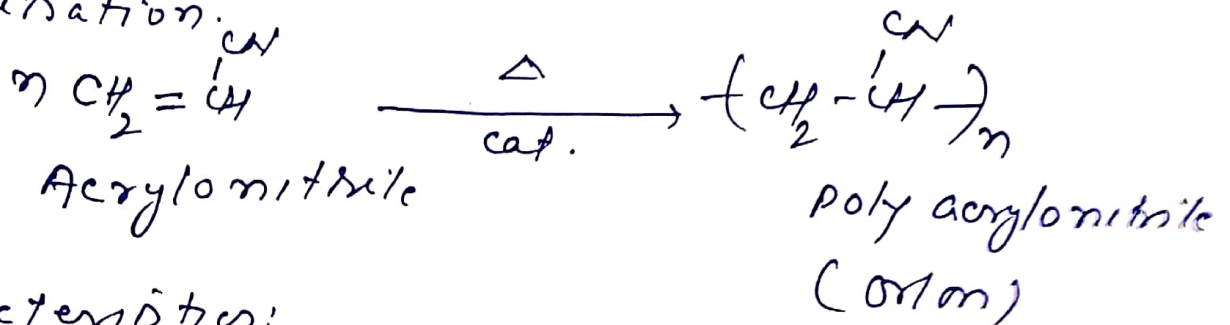
Type of polymerisation ::

- ① Addition polymerisation
- ② Condensation "

2)

Addition polymerisation:

It involves the joining of a large no. of monomers without elimination of other simple molecule is called addition polymerisation.

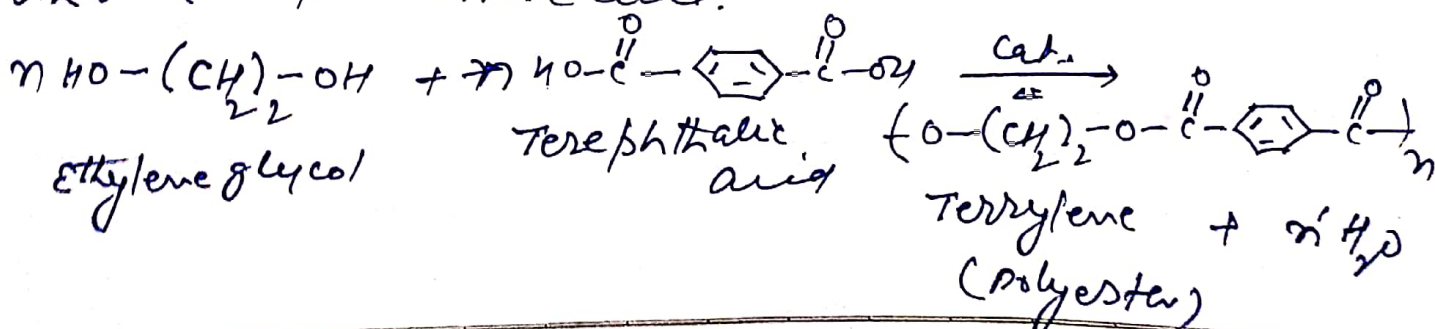


Characteristics:

- monomers are usually alkene or its derivative
- monomers and polymer are similar w their empirical formula
- No simple molecule eliminate during polymerisation
- It is chain growth polymerisation.

Condensation Polymerisation

It involves the joining of a large no. of monomers with the elimination of other simple molecule.



Characteristics:

- ① ~~the~~ monomers and polymer are different their empirical formula
- ② Here simple molecule also eliminate
- ③ It is step growth polymerisation
- ④ monomers are usually natural-d.

Classification of Polymers

- ① Based on type of monomers
 - ① Homopolymers
 - ② Co-polymers

① Homopolymers: Such polymers consist of only one type of monomers

$$nA \longrightarrow (A)_n$$

ex: Polyethylene, Teflon, PAN etc

(ii) Co-polymers: Such polymer consist of different kind of monomers



ex: Nylon-6,6, Terrylene, Bakelite