

B.Sc. II (Hons.)

24.8.20.

Organic Polymer

III "C"

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### Classification of Polymers :-

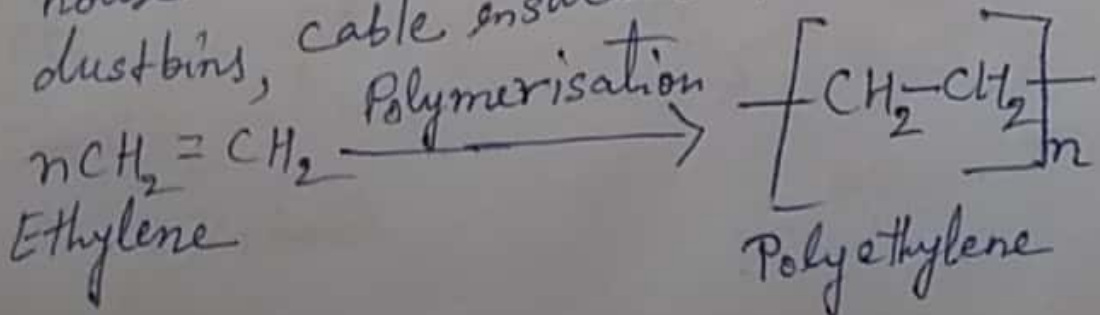
There are two main types of polymers: Addition polymers and Condensation polymers.

#### 1) Addition polymers (chain growth Polymers):

Addition polymers are formed by combination of alkene monomers to produce a single huge molecule only.

#### (a) Polyethylene (Polythene). :-

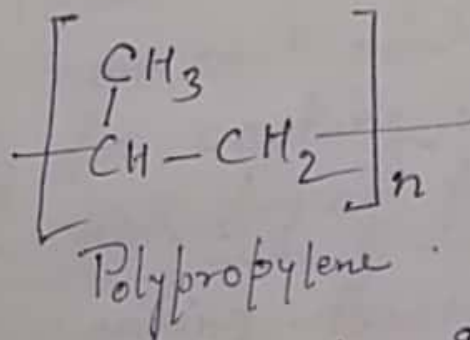
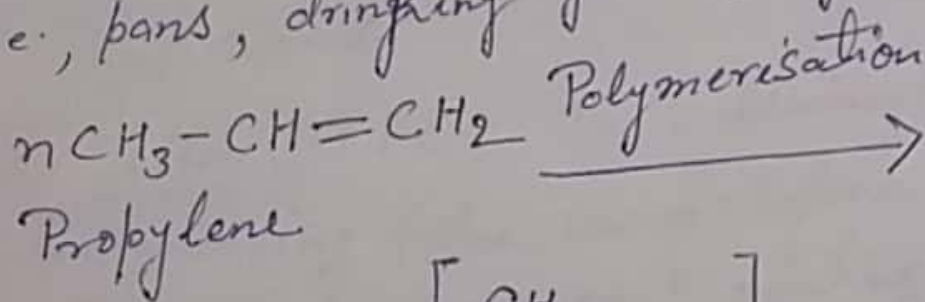
It is used in the manufacture of house ware, such as buckets and dustbins, cable insulation, etc.



2.

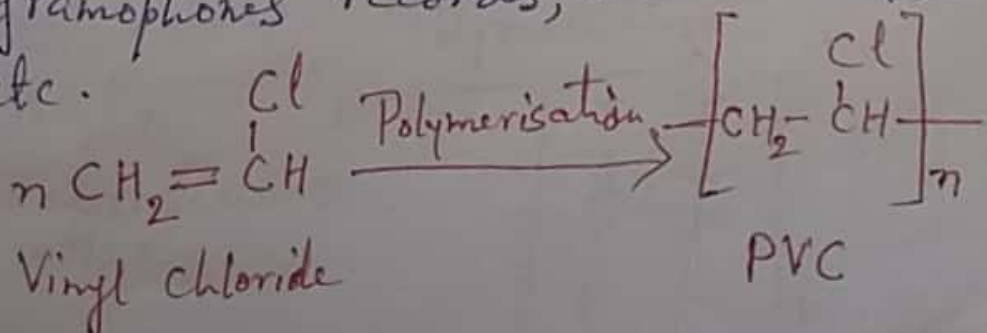
Notice that the monomer (ethylene) contains a double bond and the polymer does not.

(b) Polypropylene : — It is obtained by polymerising propylene. Polypropylene is used in the manufacture of houseware i.e., pans, drinking glasses, toys, etc.



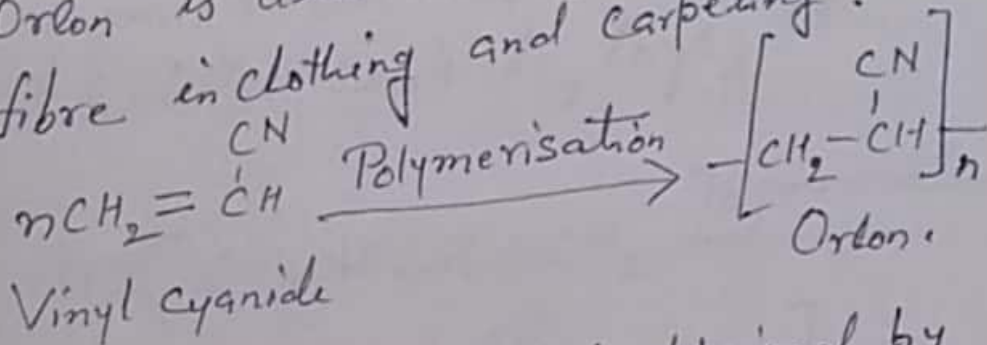
(c) Poly vinyl chloride (PVC) : It is

obtained by polymerising vinyl chloride. PVC is used in the manufacture of imitation leather, gramophones records, floor covering, etc.



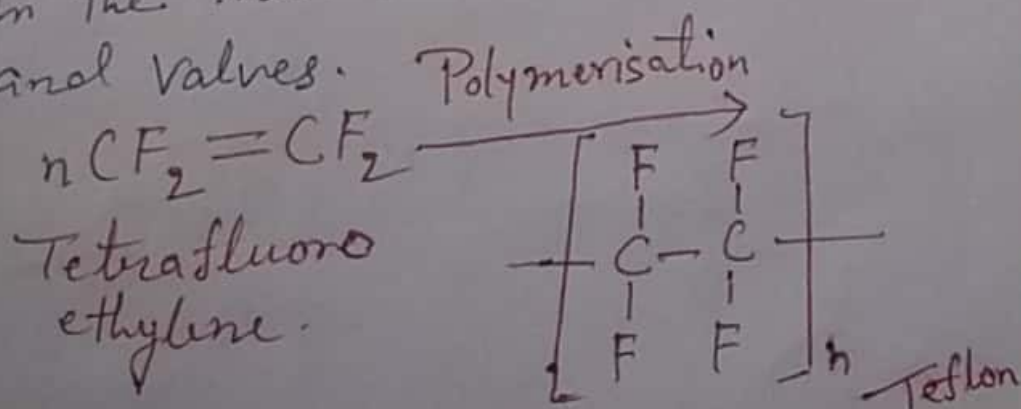
3.

(d) Orlon : It is obtained by polymerising vinyl cyanide. Orlon is used as a synthetic textile fibre in clothing and carpeting.



(e) Teflon (PTFE). It is obtained by polymerising tetrafluoro ethylene. Its use as non-stick coating particularly for cooking utensils.

Nirlep non-stick frying pans have teflon coating. Because of its low chemical reactivity, excellent toughness, electrical and heat resistance. It is used as insulation for electrical items and in the manufacture of gaskets and valves.



4.

(f) Polystyrene

It is used in the manufacture of food containers, television cabinets, toys, etc.

