

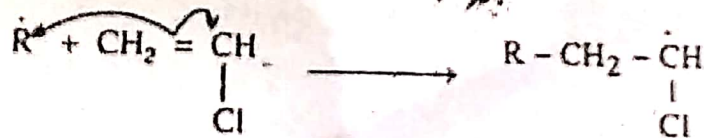
Bakelite

Q.35. Discuss the mechanism of free radical vinyl polymerisation.

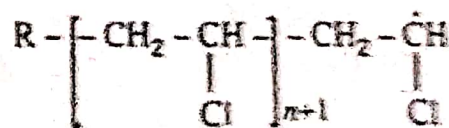
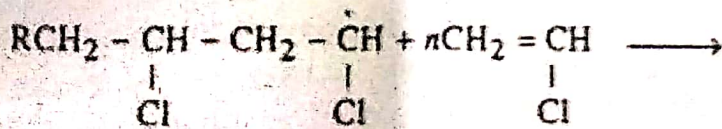
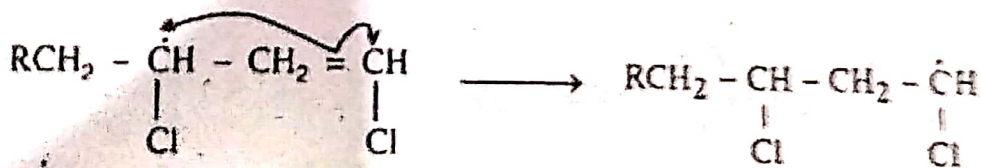
Ans. : (i) Chain initiation step involves the decomposition of an organic peroxide to give free radicals—



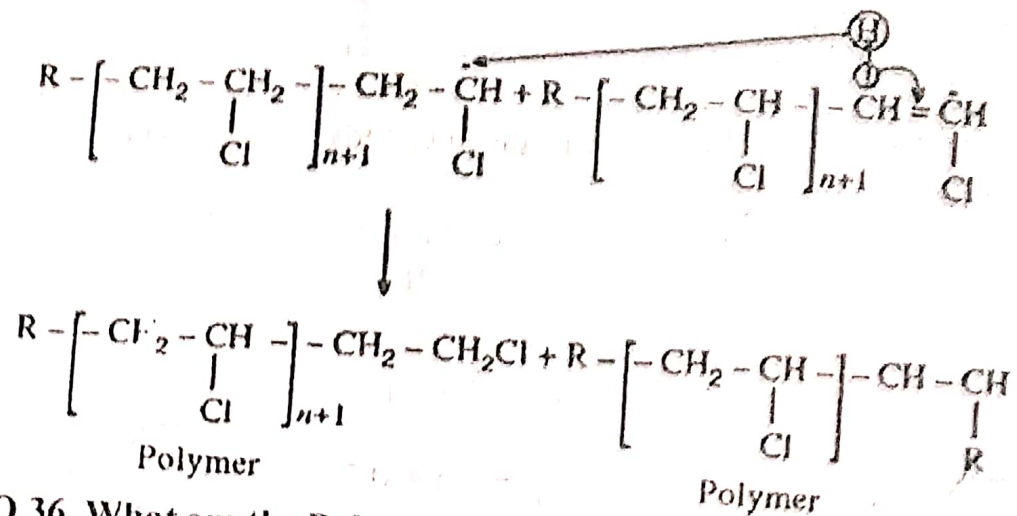
(ii) Chain propagation step is the addition of free radical to a vinylchloride molecule to form a new free radical which attacks on another vinylchloride molecule and so on—



Vinyl chloride

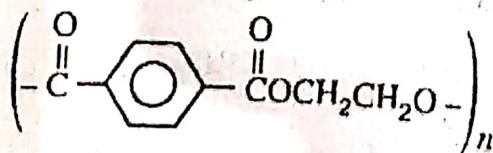
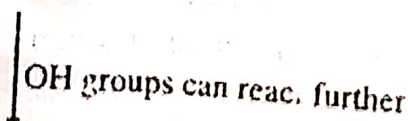
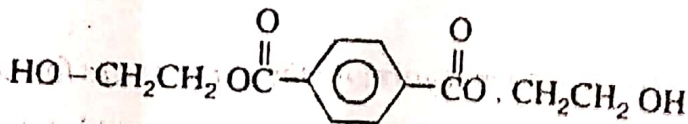
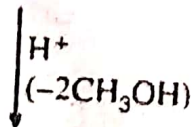
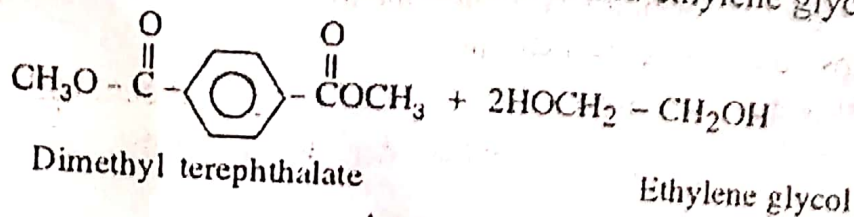


(iii) Chain termination step involves the combination of free radical or disproportionation—



Q.36. What are the Polyesters? Discuss in brief.

Ans. : The synthetic fibre **Dacron** is a polyester obtained by transesterification of dimethyl terephthalate and ethylene glycol—



Dacron ($n = 80 - 130$)

If monomers are bifunctional e.g. dimethyl terephthalate and ethylene glycol, polymer growth occurs in a linear way. Linear polymers are often excellent textile fibres. Polyester fibre is melt spun and hot drawn. Overall desirable properties have made polyesters the most common of synthetic fibres. Blending of polyesters with cotton provides with durability and excellent care properties like wrinkle resistance, crease retention etc.