



FREE RADICAL SUBSTITUTION 3

1) For the conversion of ethane to 1,1-dibromoethane.

a) Give the overall equation.



b) Give the pair of propagation steps to form bromoethane from ethane.



c) Give the pair of propagation steps to form 1,1-dibromoethane from bromoethane.



d) Give the termination step that forms butane.



2) For the conversion of methane to tetrachloromethane.

a) Give the overall equation.



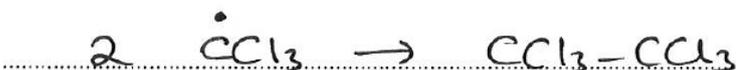
b) Give the pair of propagation steps to form chloromethane from methane.



c) Give the pair of propagation steps to form tetrachloromethane from trichloromethane.



d) Give the termination step that forms a substance with the empirical formula CCl_3 .

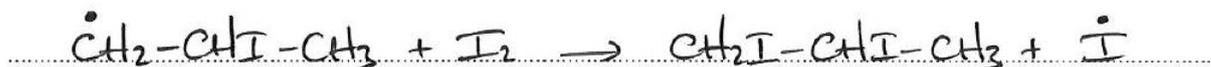
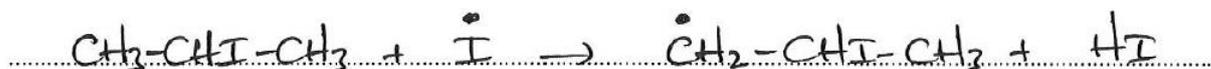


3) For the conversion of 2-iodopropane to 1,2-diiodopropane.

a) Give the overall equation.



b) Give the pair of propagation steps to form 1,2-diiodopropane from 2-iodopropane.



c) Give the termination step that forms a substance with empirical formula C₃H₆I.



4) For the conversion of 1,1,1-tribromoethane to 1,1,1-tribromo-2,2,2-trichloroethane.

a) Give the overall equation.



b) Give the pair of propagation steps to form 1,1,1-tribromo-2-chloroethane from 1,1,1-tribromoethane.



c) Give the pair of propagation steps to form 1,1,1-tribromo-2,2,2-trichloroethane from 1,1,1-tribromo-2,2-dichloroethane.



d) Give the termination step that forms a bromoalkane.

