Question 84. Match the reactions given in Column I with the names given in Column II

Column I		Column II	
(i)	$X + RX \xrightarrow{\text{Na}} R$	(a)	Fittig reaction
(ii)	$2 + 2Na \xrightarrow{\text{Ether}} + 2NaX$	(b)	Wurtz-Fittig reaction
(iii)	$ \begin{array}{c} \stackrel{+}{\overset{+}{\overset{-}{\overset{-}{\overset{-}{\overset{-}}{\overset{-}{\overset{-}}{\overset{-}}{\overset{-}}\overset{-}{\overset{-}}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}{\overset{-}}\overset{-}-$	(c)	Finkelstein reaction
(iv)	$C_2H_5Cl + NaI \xrightarrow{dry acetone} C_2H_5I + NaCl$	(d)	Sandmeyer reaction

Solution: (i-> b), (ii -> a), (iii -> d), (iv -» c)

- (i) A mixture of an alkyl halide and aryl halides gives an alkylarene when treated with sodium in dry ether and this is called Wurtz-Fittig reaction.
- (ii) Aryl halides give analogous compounds when treated with sodium in dry ether, in which two aryl groups are joined together. It is called Fittig reaction.
- (iii) Diazonium salt when treated with cuprous chloride or cuprous bromide gives chlorobenzene or bromobenzene. The reaction is known as Sandmeyer's reaction.
- (iv) Alkyl iodides are prepared by the reaction of alkyl chlorides with sodium iodide in dry acetone. The reaction is known as Finkelstein reaction.