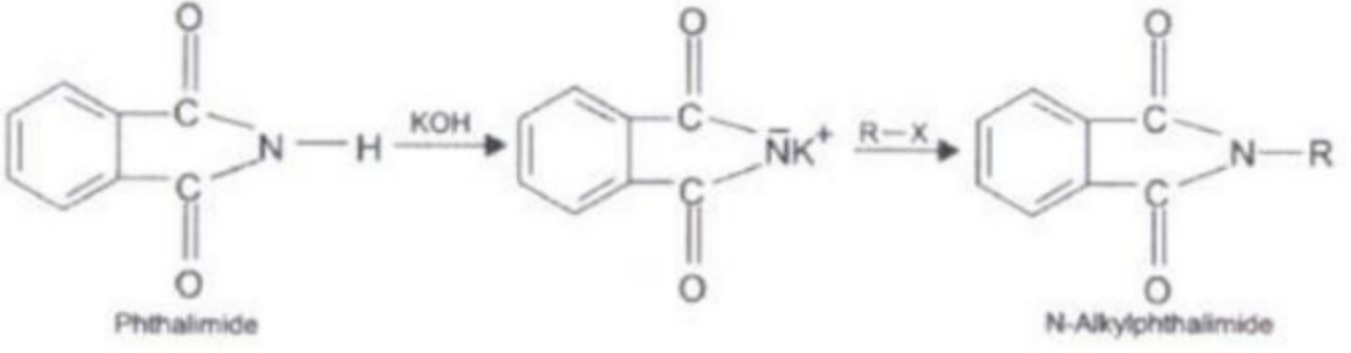
Q13. Match the reactions given in Column I with the statements given in Column

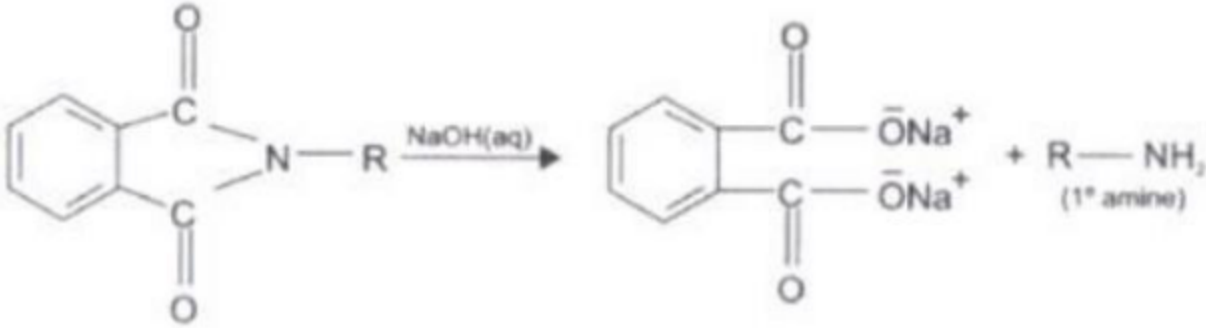
Column I	Column II
(i) Ammonolysis	(a) Amine with lesser number of carbon atoms
(ii) Gabriel phthalimide synthesis	(b) Detection test for primary amines.
(iii) Hoffmann Bromamide reaction	(c) Reaction of phthalimide with KOH and R—X
(iv) Carbylamine reaction	(d) Reaction of alkylhalides with NH_3

Ans. (i)-(d) (ii)- (c) (iii)- (a) (iv)- (b)

Explanation : (i) This process of cleavage of the C—X bond by ammonia molecule is known as ammonolysis.

(ii) Reaction of phthalimide with KOH and R—X





(iii) Amine with lesser number of carbon atoms.

$$R-\overset{O}{\overset{\|}{C}}-NH_2+Br_2+4NaOH \rightarrow R-NH_2+Na_2CO_3+2NaBr+2H_2O$$

(iv) Detection test for primary amines.

$$R-NH_2+CHCl_3+3KOH \xrightarrow{Heat} R-NC+3KCl+3H_2O$$