## Chapter 9

## **Substitution Reactions In Aromatic Compounds**

## **Practice Problems**

(1) Identify the unknowns in the following equations:

(i) 
$$NaNH_2 \rightarrow A$$
  $NaNH_2 \rightarrow A$   $NaNH_3 \rightarrow B$ 

(ii) 
$$NH_2$$
  $NaNO_2.HCI$  A

(i) 
$$\begin{array}{c} HNO_3 \\ \hline H-SO_2 \\ \end{array} \rightarrow \begin{array}{c} A \\ \hline Fe \\ \end{array}$$

(ii) 
$$\frac{CH_3}{KMnO4}$$
 A  $\frac{HNO_3}{H_2SO_4}$  B

## **Answers**

(1)

(2)

(i) 
$$A = \begin{pmatrix} NO_2 \\ B = \begin{pmatrix} V \\ Br \end{pmatrix} \begin{pmatrix} V \\ A = \begin{pmatrix} C_6H_5 \\ A = \begin{pmatrix} C_6H_5 \\ COOH \end{pmatrix} \end{pmatrix}$$