



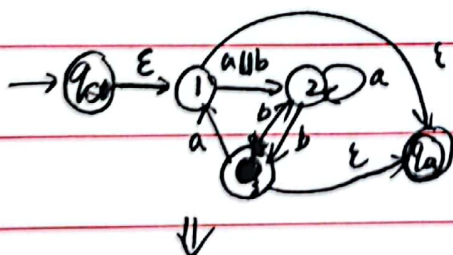
# 中国科学院大学

University of Chinese Academy of Sciences

1.28 (a)

 $a \rightarrow \text{start} \xrightarrow{a} \text{end}$ 
 $bb \rightarrow \text{start} \xrightarrow{b} \text{end}$ 
 $ab \rightarrow \text{start} \xrightarrow{a} \text{end} \xrightarrow{b} \text{end}$ 
 $abb \rightarrow \text{start} \xrightarrow{a} \text{end} \xrightarrow{b} \text{end} \xrightarrow{b} \text{end}$ 
 $(abb)^* \rightarrow \text{start} \xrightarrow{\epsilon} \text{end} \xrightarrow{a} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end}$ 
 $a(abb)^* \rightarrow \text{start} \xrightarrow{a} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{a} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end}$ 
 $a(abb)^* \cup b$ 
 $\rightarrow \text{start} \xrightarrow{\epsilon} \text{end} \xrightarrow{a} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{a} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end} \xrightarrow{\epsilon} \text{end} \xrightarrow{b} \text{end}$ 

1.21 (b)


 $\epsilon \cup ((a|b)a^*b|(b|(a|a|b))a^*b)^*\epsilon$ 
