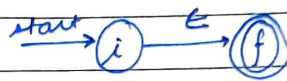


Compiler Design

Q) Write the following 5 procedures for converting from RE to NFA.

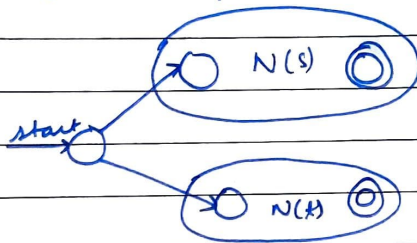
Ans (i) First parse  $r$  into its constituent subexpressions. Construct NFA's for each of the basic symbols in  $r$ .

for  $\epsilon$

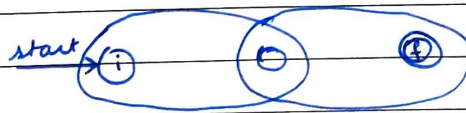


for  $a$  in  $\Sigma$

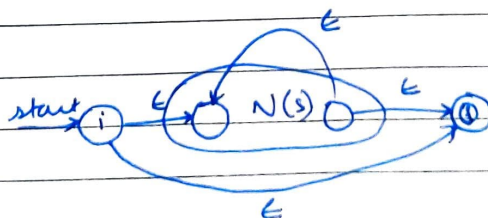
(ii) For the regular expression  $s|x$ .



(iii) For the regular expression  $st$



(iv) For the regular expression  $s^*$



(v) For the parenthesized regular expression  $(s)$ , use  $N(s)$  itself as the NFA.