

1) Convert the following Regular Expression into equivalent NFA using formal procedure. $(xUy)^* \cup (x^*Uy^*)$. X

2) Write the Regular Expression of the following languages, where $\Sigma = \{a,b\}$.

$\{w \mid \text{each } a \text{ in } w \text{ is followed by exactly three } b\}$

3) Give the Description of the following Regular Expressions.

Consider $\Sigma = \{c,d\}$.

I. $cddcc(c \cup d)^*$

II. $(c \cup d).(c \cup d)^*$