CFG - Rules

Date : Subject :

Problem ① CFG For accepting an equal number of a's and b's

$S \rightarrow asb \mid bsa \mid \varepsilon$

Problem ② CFG For accepting a number of a's is twice the number of b's

$S \rightarrow aasb \mid bsaa \mid \varepsilon$

Problem ③ CFG For accepting a palindrome $\Sigma = \{a, b\}$.

$S \rightarrow asa \mid bsb \mid a \mid b \mid \varepsilon$

Problem ④ CFG for accepting a language $\{a^{2n+3} b^n \mid n >= 0\}$.

$S \rightarrow aasbaaa \mid bsaaaaaa \mid \varepsilon$