Class test - 02

① $S \to AaB \mid aaB \mid AB$

$A \to \varepsilon$

$B \to bbA \mid \varepsilon$

i). Eliminate ε production
ii). Eliminate unit production
iii). Eliminate useless production

Step 1:.. $S \to AaB \mid aB \mid a \mid aaB \mid aa$

$B \to bbA \mid bb$

$S \to aB \mid a \mid aaB \mid aa$

$B \to bb$

CNF $\begin{cases} A \to VV \\ B \to a \end{cases}$

GNF $\{ A \to aV^*$

② . $S \to AX$

$A \to \varepsilon$

③ $S \to BX$

$B \to c$

④ $S \to AB$

⑤ $\Sigma = \{0,1\}$, $\Gamma = \{0,1,2\}$ $\{ h(0) = 0,1 \quad h(1) = 1,2$

$h(010)$ if $L = \{00, 010\}$ what is the homomorphic image of L

$h(010) = h(0)\ h(1)\ h(0)$

$= 01112010$

$L(00,1010) = L(h(00), h(1010))$

$= L(h(0), h(0), h(0)\ h(1)\ h(0))$

$= L(0101\ 0111\ 0101)$

If $\Sigma = \{0,1\}$ $1 = \{12.3\}$ $h(0) = 3122$

$h(1) = 132$ what if $(0+1)^* (00)^*$

$(0+1)^* (00)^* = (h(0) + h(1))^* \ L(0)\ h(0)^*)$

$(3122 + 132)^* (3122313.0)$