

10)

(a)

$$S \rightarrow 0B|1A$$

$$A \rightarrow 0|0S|AA$$

$$B \rightarrow 1|1S|0BB$$

00110101

left

$$S \xrightarrow{\text{lm}} 0B$$

$$\Rightarrow 00BB \quad (B \rightarrow 0BB)$$

$$\Rightarrow 001B \quad (B \rightarrow 1)$$

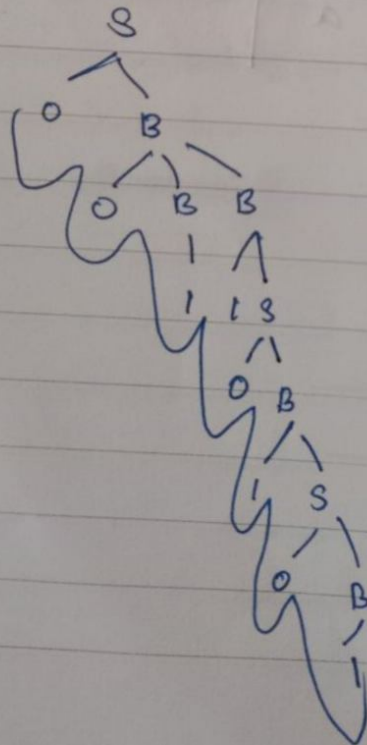
$$\Rightarrow 0011S \quad B \rightarrow 1S$$

$$\Rightarrow 00110B \quad S \rightarrow 0B$$

$$\rightarrow 001101S \quad B \rightarrow 1S$$

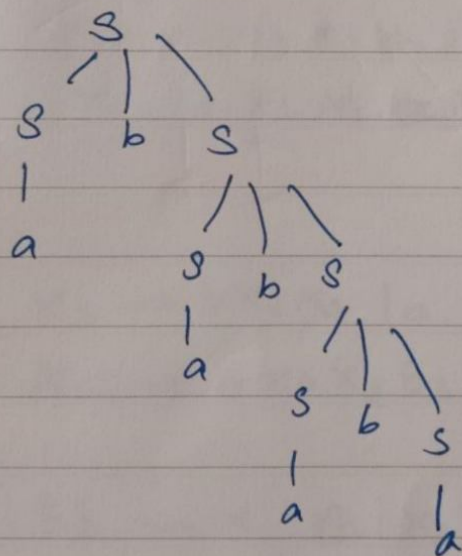
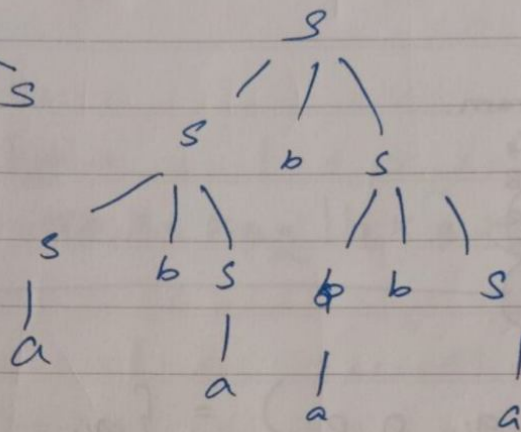
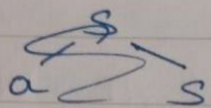
$$\rightarrow 0011010B \quad S \rightarrow 0B$$

$$\rightarrow 00110101 \quad B \rightarrow 1$$



Ambiguous $w \in L(G)$ $S \xrightarrow{*} w$

Consider $w = abababab \in L(G)$.



\therefore more than 1 derivation
 \therefore ambiguous.