1.

$$S \Rightarrow (0S1)|E$$
$$E \Rightarrow (1E0)|\epsilon$$

2.

$$S \Rightarrow$$
a S bbb | S b | ϵ

3.

$$\begin{split} S \Rightarrow \mathbf{T} &= \mathbf{t} \mid \mathbf{F} = \mathbf{f} \\ T \Rightarrow (\mathbf{T} \vee \mathbf{A}) \mid \neg(\mathbf{F}) \mid (\mathbf{T} \wedge \mathbf{T}) \mid \mathbf{t} \\ F \Rightarrow (\mathbf{F} \vee \mathbf{F}) \mid \neg(\mathbf{T}) \mid (\mathbf{F} \wedge \mathbf{A}) \mid \mathbf{f} \\ A \Rightarrow F | T \end{split}$$