Grammar

$J \to H \mid A$

$H \to hP_H \mid htR_H \mid hfF_A \mid hoI_A$

$A \to aP_A \mid atR_A \mid afF_H \mid aoI_H$

$P_H \to xH \mid sB_H \mid yA$

$P_A \to xA \mid sB_A \mid yH$

$I_H \to iH \mid iA$

$I_A \to iA \mid iH$

$B_H \to mI_A \mid nrH \mid nrA \mid noI_A \mid nF_H \mid mF_H \mid m \mid n$

$B_A \to mI_H \mid nrH \mid nrA \mid noI_H \mid nF_A \mid mF_A \mid m \mid n$

$R_H \to bH \mid gI_H$

$R_A \to bA \mid gI_A$

$F_H \to I_H \mid F_H \mid sB_H$

$F_A \to I_A \mid F_A \mid sB_A$