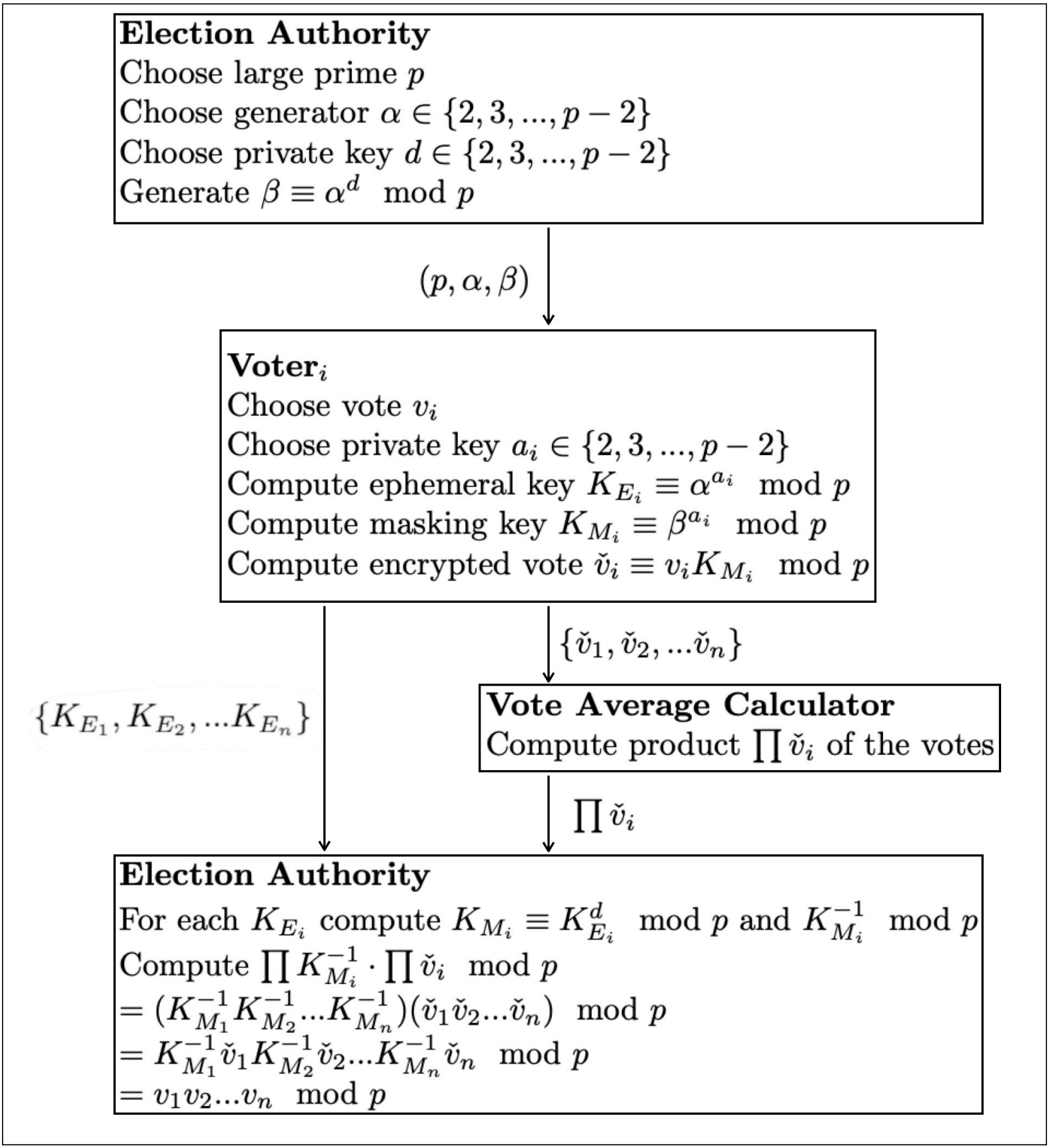
**Election Authority**
Choose large prime $p$
Choose generator $\alpha \in \{2, 3, ..., p-2\}$
Choose private key $d \in \{2, 3, ..., p-2\}$
Generate $\beta \equiv \alpha^d \mod p$
$(p, \alpha, \beta)$
**Voter**$_i$
Choose vote $v_i$
Choose private key $a_i \in \{2, 3, ..., p-2\}$
Compute ephemeral key $K_{E_i} \equiv \alpha^{a_i} \mod p$
Compute masking key $K_{M_i} \equiv \beta^{a_i} \mod p$
Compute encrypted vote $\check{v}_i \equiv v_i K_{M_i} \mod p$
$\{\check{v}_1, \check{v}_2, ...\check{v}_n\}$
$\{K_{E_1}, K_{E_2}, ...K_{E_n}\}$
**Vote Average Calculator**
Compute product $\prod \check{v}_i$ of the votes
$\prod \check{v}_i$
**Election Authority**
For each $K_{E_i}$ compute $K_{M_i} \equiv K_{E_i}^d \mod p$ and $K_{M_i}^{-1} \mod p$
Compute $\prod K_{M_i}^{-1} \cdot \prod \check{v}_i \mod p$
$= (K_{M_1}^{-1} K_{M_2}^{-1} ... K_{M_n}^{-1})(\check{v}_1 \check{v}_2 ... \check{v}_n) \mod p$
$= K_{M_1}^{-1} \check{v}_1 K_{M_2}^{-1} \check{v}_2 ... K_{M_n}^{-1} \check{v}_n \mod p$
$= v_1 v_2 ... v_n \mod p$