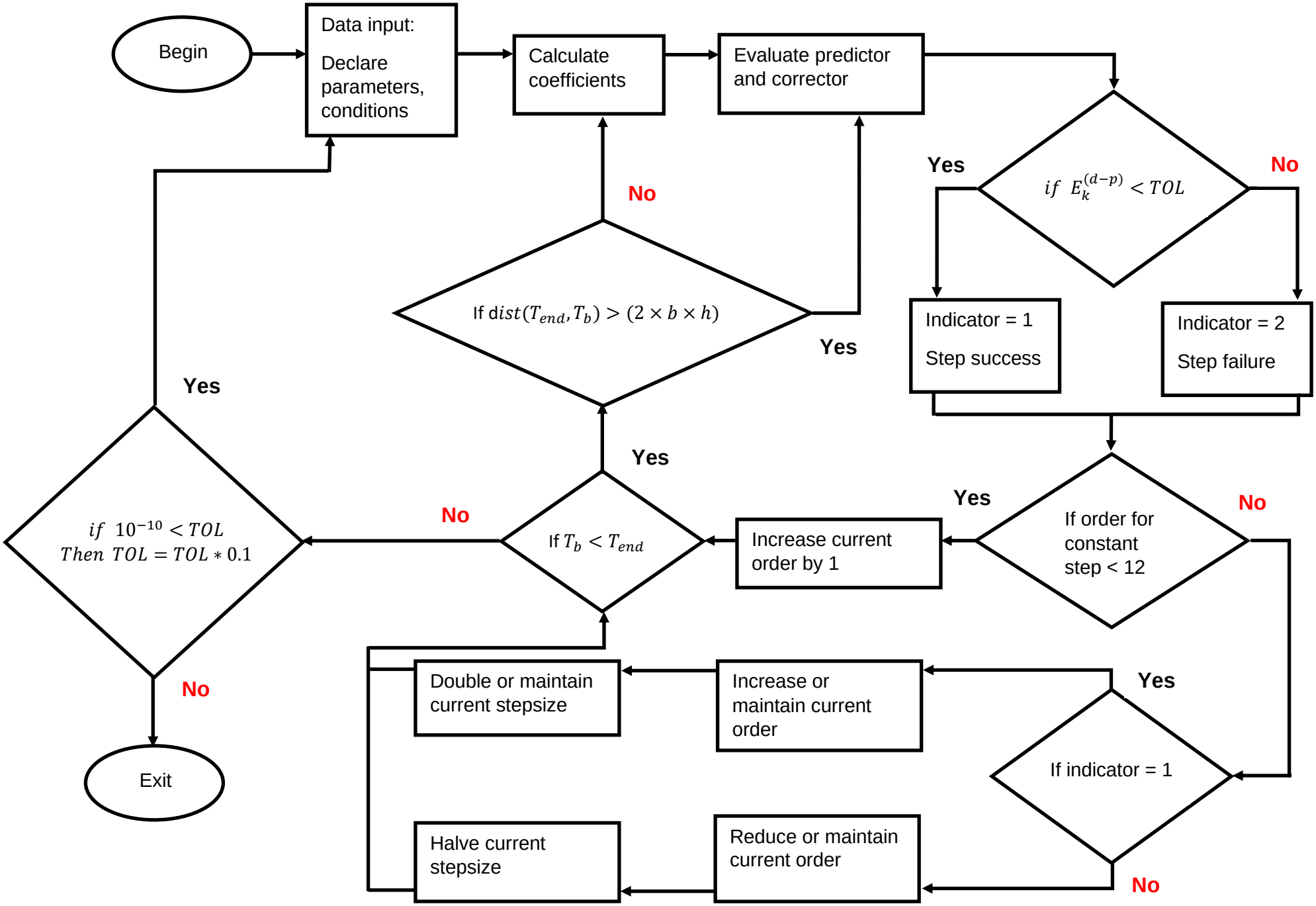
Begin
Data input:
Declare parameters, conditions
Calculate coefficients
Evaluate predictor and corrector
$if\ \ E_k^{(d-p)} < TOL$
Yes
No
Indicator = 1
Step success
Indicator = 2
Step failure
If order for constant step < 12
Yes
No
Increase current order by 1
If $T_b < T_{end}$
No
Yes
If $dist(T_{end}, T_b) > (2 \times b \times h)$
No
Yes
$if\ \ 10^{-10} < TOL$
$Then\ \ TOL = TOL * 0.1$
Yes
No
Exit
If indicator = 1
Yes
No
Increase or maintain current order
Double or maintain current stepsize
Reduce or maintain current order
Halve current stepsize