```
clc; clear;

% Given Parameters
k = 45;                 % Thermal conductivity (W/mK)
L = 0.05;               % Thickness (m)
h = 25;                 % Convection coefficient (W/m^2K)
sigma = 5.67e-8;        % Stefan-Boltzmann constant
epsilon = 0.85;         % Emissivity
Ti = 500;               % Inside temperature (K)
Tinf = 300;             % Ambient temperature (K)

% Define transcendental function
f = @(Ts) (k/L)*(Ti - Ts) ...
          - h*(Ts - Tinf) ...
          - sigma*epsilon*(Ts^4 - Tinf^4);

% Initial guess
Ts_guess = 400;

% Solve using fzero
Ts = fzero(f, Ts_guess);

% Display result
disp('Surface Temperature (K):')
```

```
Surface Temperature (K):
```

```
disp(Ts)
```

```
  491.9645
```