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181 Eng 04/080

Electrical / Electronics

ENG 382

Engineering mathematics IV

Assignment

- Function Command

function dydt = Enon fun (t, y)

dydt(1) = (-0.03 * y(1)) + (0.005 * y(2)) + 1;

dydt(2) = (0.03 * y(1)) - (0.018 * y(2)) + (0.075 * y(3));

dydt(3) = (0.013 * y(2)) - (0.0375 * y(3));

dydt = dydt';

end

* Simulation mfile

- Command window

clear all

clc

close all

[t, y] = ode45('Enon fun', [0:45:1200], [0 0 0]);

figure(1)

- Subplot(3, 1, 1)

plot(t, y(:, 1), 'b-g')

xlabel('Time (min)')

ylabel('Volume (litre)')

legend('Tank 1')

grid on

grid minor

axis tight

- Subplot(3, 1, 2)

plot(t, y(:, 2), 'r-b')

xlabel('Time (min)')

And
I want

↓ label ('Volume (litre)')
legend ('Tank 2')
grid on
grid minor
axis tight

Subplot (3, 1, 3)
plot (t, yCi, 1), '+-r')
x label ('Time (min)')
↓ label ('Volume (litre)')
legend ('Tank 3')
grid on
grid minor
axis tight.

* from the question, I substituted Q_1, Q_2, Q_3 with y_1, y_2, y_3 respectively to reduce confusion I encountered using Q_1, Q_2 & Q_3 to solve.

```
29- ylabel ('volume (litre)')
30- legend('Tank 3')
31- grid on
32- grid minor
33- axis tight
34-
```

Figure 1 [minimize] [maximize] [close]

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