

```
1 function [dQdt] = geles(t,Q)
2
3 dQdt(1)=-((15/500)*Q(1))+ ((5/1000)*Q(2))+1;
4 dQdt(2)=((15/500)*Q(1))-((18/1000)*Q(2))+ ((3/400)*Q(3));
5 dQdt(3)=((13/1000)*Q(2))-((13/400)*Q(3));
6 dQdt=dQdt';
7 end
```

```
1 commandwindow
2 clearvars
3 clc
4 close all
5
6 span= [0:1:1200];
7 ini=[0 0 0];
8 [t,Q]= ode45(@geles,span,ini);
9
10 figure(1)
11 subplot(3,1,1)
12 plot(t,Q(:,1),'go-')
13 xlabel('Time(min)')
14 ylabel('Volume 1(litres)')
15 legend('Tank 1', 'Location', 'South')
16 grid on
17 axis tight
18 title('Figure 1:Dynamic Responses of the Tanks')
19
20 subplot(3,1,2)
21 plot(t,Q(:,2),'b*--')
22 xlabel('Time(min)')
23 ylabel('Volume 2(litres)')
24 legend('Tank 2', 'Location', 'South')
25 grid on
26 axis tight
27
28 subplot(3,1,3)
29 plot(t,Q(:,3),'r+--')
30 xlabel('Time(min)')
31 ylabel('Volume 3(litres)')
32 legend('Tank 3', 'Location', 'South' )
33 grid on
34 axis tight
```

Figure 1: Dynamic Responses of the Tanks

