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

```
commandwindow
clear
clc
close all
width= [0:1:1200];
initial=[0 0 0];
[t,Q]= ode45(@Otu,width,initial);
figure(1)
subplot(3,1,1)
plot(t,Q(:,1),'go-')
xlabel('Time (min)')
ylabel('Volume(litres)')
legend('Tank 1', 'Location', 'South')
grid on
axis tight
title('Figure 1:Dynamic Responses of the Tanks')
subplot(3,1,2)
plot(t,Q(:,2),'b*--')
xlabel('Time (min)')
ylabel('Volume(litres)')
legend('Tank 2', 'Location', 'South')
grid on
axis tight
subplot(3,1,3)
plot(t,Q(:,3),'r+--')
```

```
26 xlabel('Time(min)')
27 ylabel('Volume (litres)')
28 legend('Tank 3', 'Location', 'South' )
29 grid on
30 axis tight
```

Figure 1:Dynamic Responses of the Tanks