

```
>> sys1=1/(s+1)
```

```
sys1 =
```

$$\frac{1}{s+1}$$

Continuous-time transfer function.

```
>> sys2=(s+2)/(s+3)
```

```
sys2 =
```

$$\frac{s+2}{s+3}$$

Continuous-time transfer function.

```
>> sysseries=series(sys1,sys2)
```

```
sysseries =
```

$$\frac{s+2}{s^2+4s+3}$$

Continuous-time transfer function.

```
>> sysfeedback=feedback(sysseries,1)
```

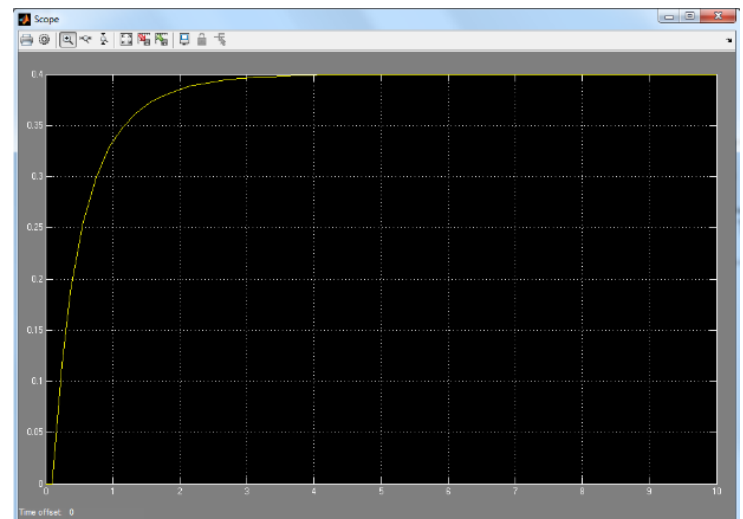
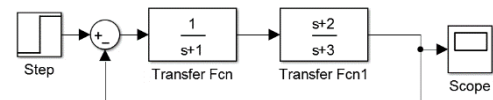
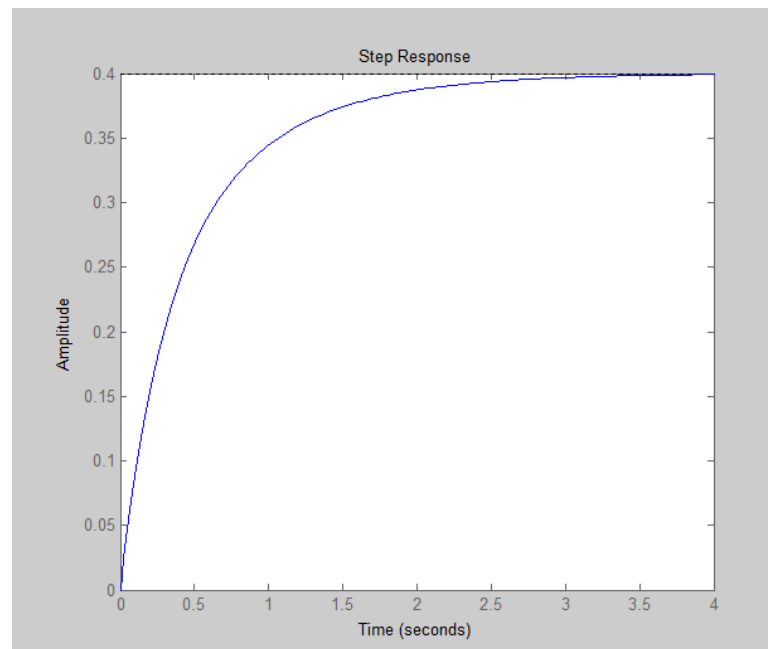
```
sysfeedback =
```

$$\frac{s+2}{s^2+5s+5}$$

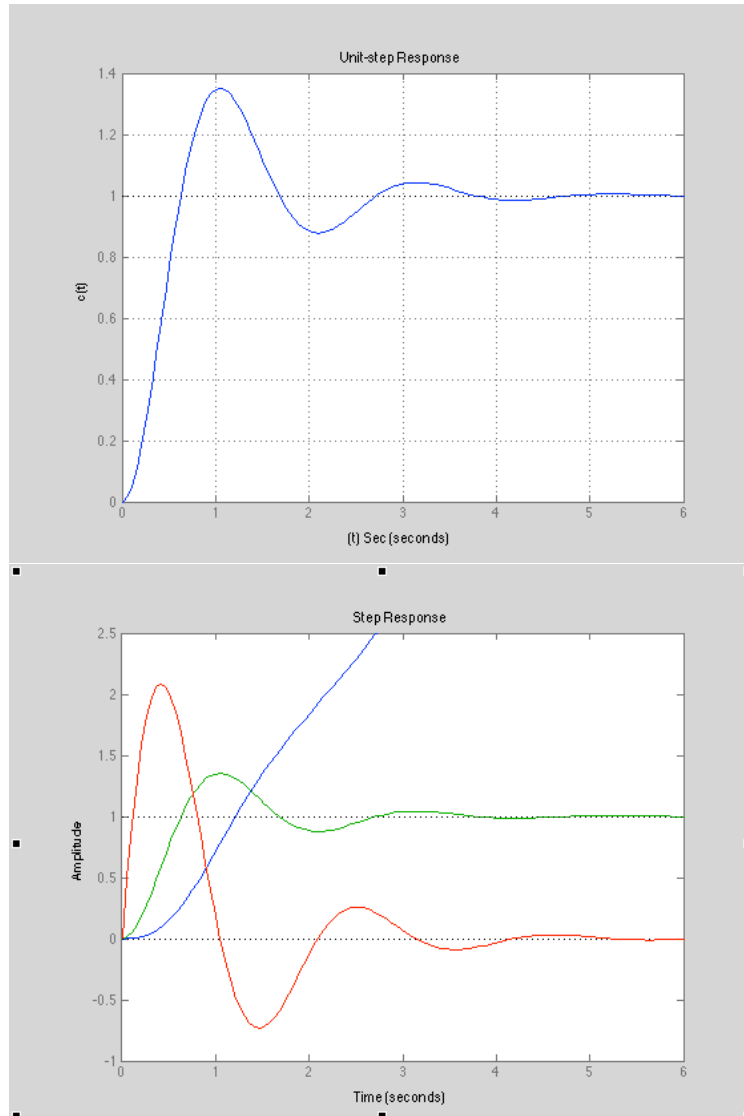
Continuous-time transfer function.

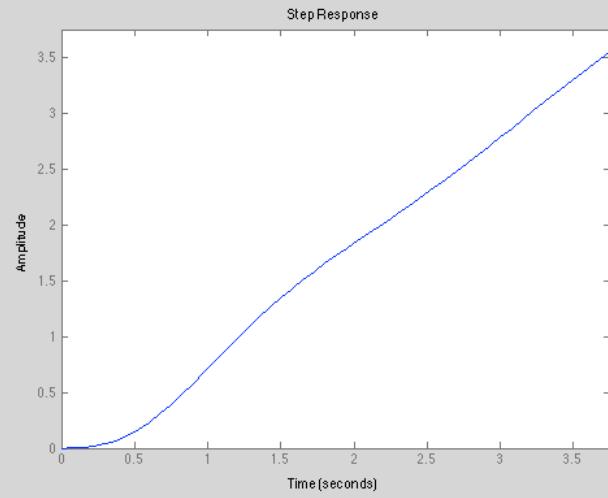
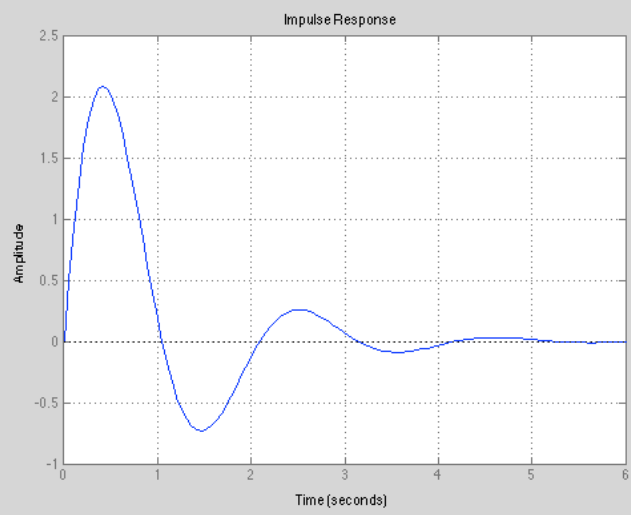
```
>> figure,
```

```
>> step (sysfeedback)
```



HW2





#10)

Matlab code

```
>> s=tf('s');  
sys1=10/(s^2+2*s+10);  
>> sys1
```

sys1 =

```
      10  
-----  
s^2 + 2 s + 10
```

Continuous-time transfer function.

```
>> figure  
>> hold on  
>> grid  
>> step(sys1)  
>> impulse(sys1)  
>> sys1=10/((s^2+2*s+10)*s); %for ramp func  
>> step(sys1)  
>> ylim([-1 2.5])  
>> xlim([0 6])  
>> legend('step','impulse','ramp')  
>> ylabel('c(t)')  
>> title('Unit-func Response')
```

