VE216
Introduction to Signals and Systems

PRELAB 1 ATTACHED PAGES

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4.1 (b)

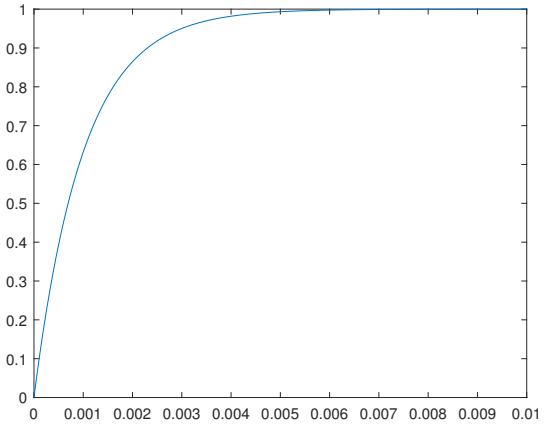

Figure 1. 4.1(b).

MATLAB Code:

```
t=linspace(0,0.01,1000);
y=(1-exp(-1000*t)).*heaviside(t);
plot(t,y);
axis([0 0.01 0 1]);
```

4.3 (c) (i)

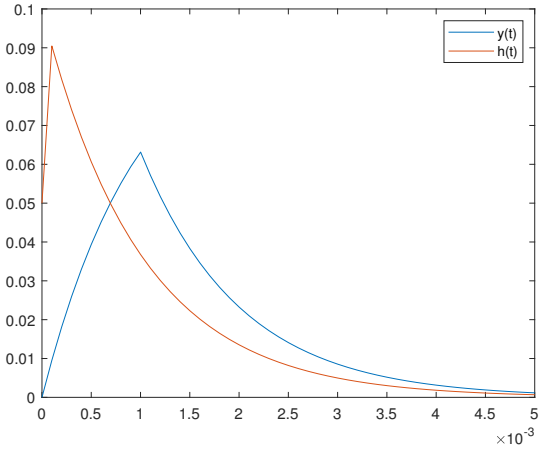

Figure 2. 4.3(c)(i).

(ii)

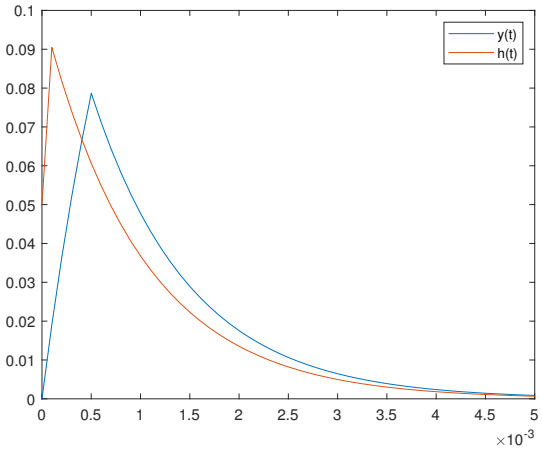

Figure 3. 4.3(c)(ii).

(iii)

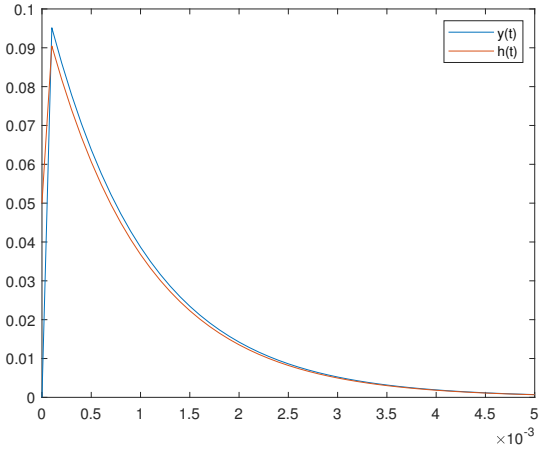

Figure 4. 4.3(c)(iii).

MATLAB Code:

```
t=linspace(0,0.1,1000);
h=0.1*exp(-1000*t).*heaviside(t);
y=0.1*((1-exp(-1000*t)).*heaviside(t)-(1-exp(-1000*(t-10^(-3)))).*
    heaviside(t-10^(-3)));
plot(t,y,t,h);
axis([0 0.005 0 0.1]);
legend('y(t)','h(t)');
y=0.2*((1-exp(-1000*t)).*heaviside(t)-(1-exp(-1000*(t-0.5*10^(-3))
    )).*heaviside(t-0.5*10^(-3)));
plot(t,y,t,h);
axis([0 0.005 0 0.1]);
legend('y(t)','h(t)');
y=(1-exp(-1000*t)).*heaviside(t)-(1-exp(-1000*(t-0.1*10^(-3)))).*
    heaviside(t-0.1*10^(-3));
plot(t,y,t,h);
axis([0 0.005 0 0.1]);
legend('y(t)','h(t)');
```