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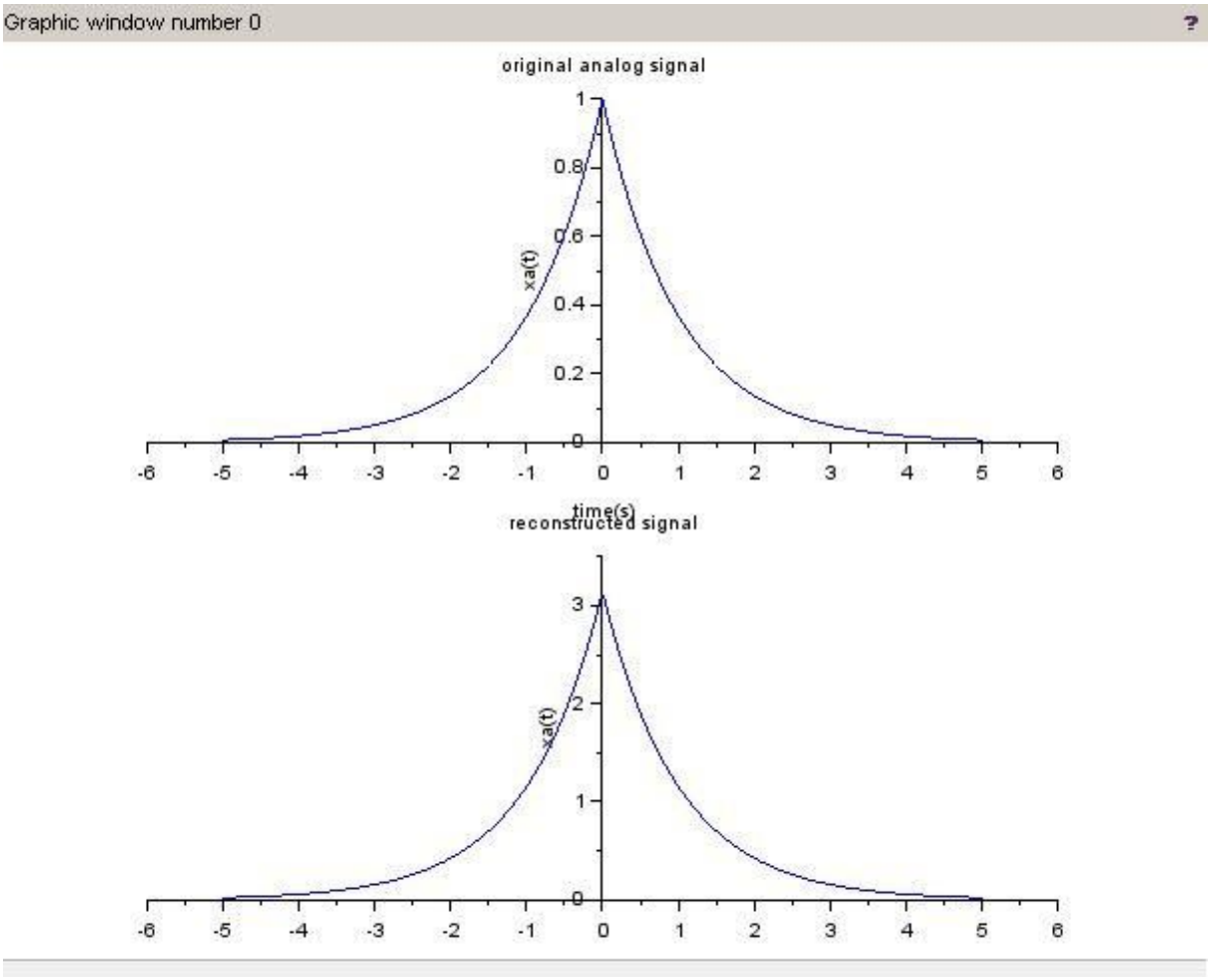
CLASS:- B.E - 4
ROLL NO:- 04
BATCH:- A

EXPERIMENT 3

SCILAB CODE:

```
clear;
clc;
close;
A=1;
t1 = 0.005;
t = -5:t1:5;
xa = exp(-A*abs(t));
Fs = input('Enter the Sampling Frequency in Hertz : ');
// Inpu t--> S c a l a r ( e . g . : 1 , 2 , 4 , 20 , 1 0 0 )
Ts = 1/Fs;
nTs =-5:Ts:5;
x = exp(-A*abs(nTs));
Xa = x*sinc(Fs*(ones(length(nTs),1) * t-nTs' * ones(1,length(t))))
;
subplot(2,1,1) ;
a=gca() ;
a.x_location = "origin";
a.y_location = "origin";
plot(t,xa) ;
xlabel('time(s)') ;
ylabel('xa(t)');
title('original analog signal');
subplot(2,1,2) ;
a=gca();
a.x_location="origin";
a.y_location="origin";
xlabel('time(s)') ;
ylabel('xa(t)')
title('reconstructed signal') ;
plot(t,Xa);
```

OUTPUT:


Graphic window number 0
original analog signal
xa(t)
time(s)
reconstructed signal
xa(t)