

# SNS-EEC LAB COMPRE

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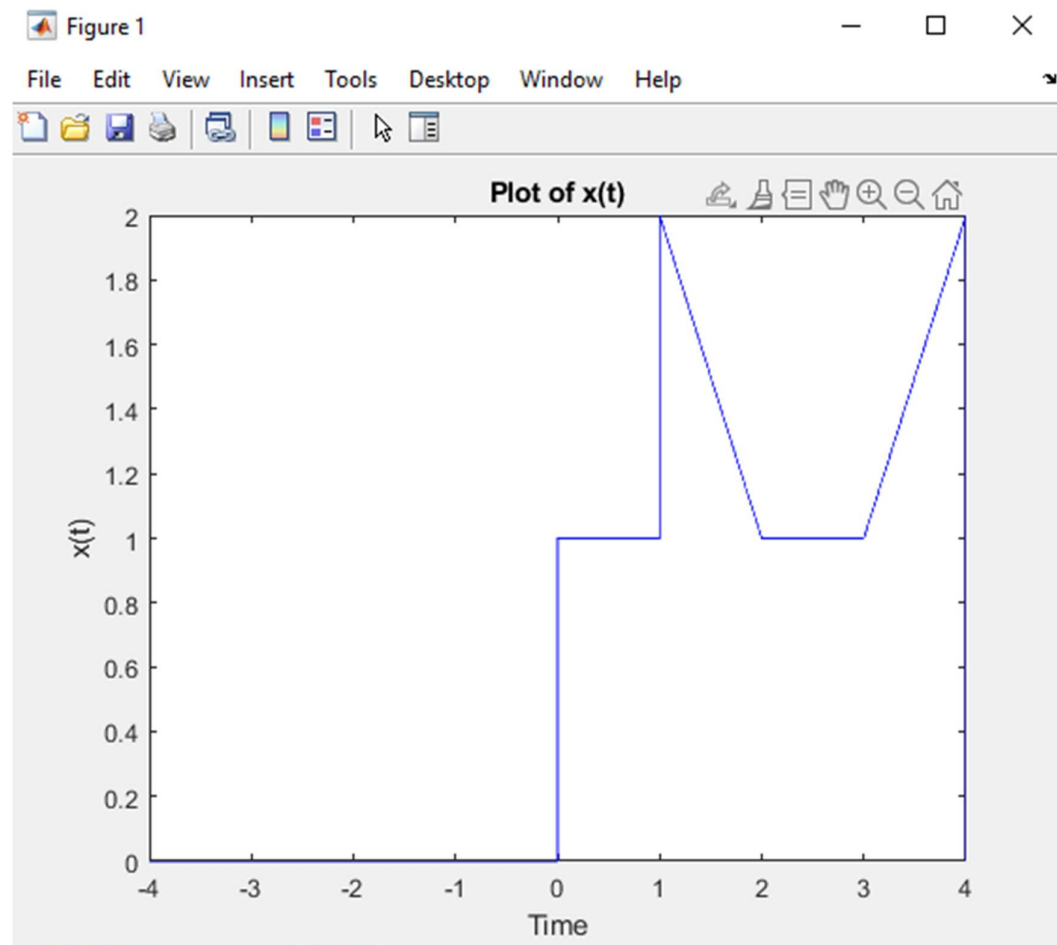
## 1) a) Code:

```
t = -4:0.001:4;

% 1a) the signal x(t)
x = (t<0).*0 + (t>=0 & t<1).*1 + (t>=1 & t<2).*(-t+3) + (t>=2 &
t<3).*1 + (t>=3 & t<4).*(t-2) + (t>=4).*0;

plot(t, x, 'b');
title("Plot of x(t)");
xlabel("Time"), ylabel("x(t)");
```

## Output:



## I, II, III, IV Answers:

### Code:

```
t = -4:0.001:4;

% 1a) the signal x(t)
x = (t<0).*0 + (t>=0 & t<1).*1 + (t>=1 & t<2).*(-t+3) + (t>=2 & t<3).*1 +
(t>=3 & t<4).*(t-2) + (t>=4).*0;

clf
subplot(411)
plot(t, x, 'b');
title("Plot of x(t)");
xlabel("Time"), ylabel("x(t)");

% I. x(t-1)
t1 = t-1;
x1 = (t1<0).*0 + (t1>=0 & t1<1).*1 + (t1>=1 & t1<2).*(-t1+3) + (t1>=2 &
t1<3).*1 + (t1>=3 & t1<4).*(t1-2) + (t1>=4).*0;

% II. x(2t+1)
t2 = 2*t+1;
x2 = (t2<0).*0 + (t2>=0 & t2<1).*1 + (t2>=1 & t2<2).*(-t2+3) + (t2>=2 &
t2<3).*1 + (t2>=3 & t2<4).*(t2-2) + (t2>=4).*0;

% III. x(-t+4)
t3 = -t+4;
x3 = (t3<0).*0 + (t3>=0 & t3<1).*1 + (t3>=1 & t3<2).*(-t3+3) + (t3>=2 &
t3<3).*1 + (t3>=3 & t3<4).*(t3-2) + (t3>=4).*0;

subplot(412)
plot(t, x1);
text(0, 2.15, "Plot of x(t-1)");
xlabel("Time"), ylabel("x(t-1)");

subplot(413)
plot(t, x2);
text(0, 2.15, "Plot of x(2t+1)");
xlabel("Time"), ylabel("x(2t+1)");

subplot(414)
plot(t, x3);
text(0, 2.15, "Plot of x(-t+4)");
xlabel("Time"), ylabel("x(-t+4)");
```

Output:

