PULSE AMPLITUDE MODULATION (PAM)

EEEN 464– DIGITAL COMMUNICATION SYSTEMS

MATLAB CODE FOR PAM (1)

```
a = input('Enter the amplitude  (1 -4) = ');
f = input('Enter the frequency  (2-5) = ');
t = 0:0.02:2;
x1 = 1; % Generate the impulse signal
x2 = a*sin(2*pi*f*t); % Generate the sine wave
y = x1.*x2; %modulation step
subplot(3,1,1); % Plot the impulse signal
stem(x1);
title('Impulse Signal');
```

MATLAB CODE FOR PAM (2)

```
xlabel('Time');
ylabel('Amplitude ');
subplot(3,1,2) % Plot the sine wave
plot(t,x2);
title('Sine Wave');
xlabel('Time ');
ylabel('Amplitude ');
subplot(3,1,3) % Plot the PAM wave
stem(t,y);
title('PAM Wave');
xlabel('Time');
```

MATLAB CODE FOR PAM (3)