**EE 301 Fall 2018-2019**

**HW 1**

**Group Number:66**

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| **1)** | a) |  |
|  | b) |  |
|  | c) |  |
|  | d) |  |
|  | e) |  |
|  | f) |  |

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| **2)** | a) i) |  |
|  | ii) |  |
|  | iii) |  |
|  | b) |  |
| **3)** | a) |  |
|  | b) |  |
|  | c) |  |
|  | d) |  |
|  | e) |  |
|  | f) |  |

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| **4)** | a) | i) |  |
|  |  | ii) |  |
|  | b) | i) |  |
|  |  | ii) |  |
|  |  | iii) |  |

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| **5)** | a) |  |
|  | b) | y= [1,2,3,2,2,1]; % input signal  indexy=[-2 -1 0 1 2 3 ]; % index of signal  h=[1,5,10,11,8,4,1]; % impulse response  figure(1);  stem(indexy,y);  title('input signal');  grid on;  xlim([-5,5]);  figure(2)  stem(h);  title('impulse response');  grid on;      lenConv= length(h)+length(y); % length of convolution sum  Conv=[]; % output of signal    for i=1:lenConv;  sum=0;  for j=1:length(y);    if i-j>0 && i-j<(length(h)+1)  sum= sum+ h(i-j)\*y(j);  end    end  Conv=[ Conv sum];    end      indexConv=[];    for i=1:lenConv  indexConv= [indexConv ,(indexy(1)+i-2)];    end    figure(3);  stem(indexConv, Conv);  title('Convolution Signal');  xlim([-3 11]);  grid on; |