VITERBI CODING

clear all;

close all;

clc;

k=input('Enter the no of input message');

n=input('Enter the no of bits in codeword');

m=input('Enter the no of shift register');

M=input('Enter the message');

for i=1:n

g(i)=input('Generator matrix in decimal no');

end

disp(g);

trellis=poly2trellis(m,g);

disp(trellis);

code=convenc(M,trellis);

disp('Generated codeword is');

disp(code);

r=input('Enter the received codeword');

tblen=3;

opmod='trunc';

detype='hard';

out=vitdec(r,trellis,tblen,opmod,detype);

disp('Decoded Message is=');

disp(out);

OUTPUT

Enter the no of input message 1

Enter the no of bits in codeword 3

Enter the no of shift register 3

Enter the message[1 0 1 1 0]

Generator matrix in decimal no 4

Generator matrix in decimal no 7

Generator matrix in decimal no 5

4 7 5

numInputSymbols: 2

numOutputSymbols: 8

numStates: 4

nextStates: [4x2 double]

outputs: [4x2 double]

Generated codeword is

1 1 1 0 1 0 1 0 0 1 0 1 0 0 1

Enter the received codeword[1 1 1 0 1 1 1 0 0 1 0 1 0 0 1]

Decoded Message is=

1 0 1 1 0