EXPT. NO. 3

**Problem Statement: Simulate Shannon fano/ Huffman code using MATLAB/Octave. Determine Efficiency and redundancy for the given Source Coding technique.**

# Huffman

clc;

clear all; close all;

pkg load communications symbols = 1:5;

p=[0.4 0.2 0.2 0.1 0.1];

disp(symbols); disp(p);

dict = huffmandict(symbols,p);

disp(dict);

inputSig = randsrc(10,1,[symbols;p]); disp(inputSig);

code = huffmanenco(inputSig,dict); disp(code);

decode = huffmandeco(code,dict); disp(decode)

# Shannon Fannon clear all;

clc;

list\_symb = [1 2 3 4 ];

list\_proba = [0.5 0.25 0.125 0.125];

dict = shannonfanodict(list\_symb,list\_proba);

disp(dict)

%dict = shannonfanodict(list\_symb,list\_proba,0,true);

%disp(dict);

inputSig =[3 3 1 1 1 2 3 3 4];

code = shannonfanoenco(inputSig,dict); disp(code);

