

Tutorial –IV

Huffman Coding

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Problem No: 1

- Consider a DMS with seven possible symbols x_i , $i=1,2,\dots,7$ and the corresponding probabilities $p_1=0.37$, $p_2=0.33$, $p_3=0.16$, $p_4=0.07$, $p_5=0.04$, $p_6=0.02$, and $p_7=0.01$. Construct the Huffman coding tree. And determine the following:
 - i. Average codeword length
 - ii. Entropy of the source
 - iii. Coding efficiency
 - iv. How much average codeword length exceeds entropy?