Assignment No. 3
Module 5

1. Justify "Huffman coding is lossless compression technique".
2. What are different types of data redundancies found in a digital image? Explain in details?
3. When a code is said to be "Prefix code"? Mention one advantage of Prefix code.
4. Explain the Principal of arithmetic coding. Hence generate a decimal tag for the sequence: SWISS_MISS. Also decode the decimal tag.
5. What are the advantages of minimum variance Huffman codes over normal Huffman codes? Design a minimum variance Huffman code on the source with alphabet $A = \{a_1, a_2, a_3, a_4, a_5\}$ with respective probabilities $\{0.25, 0.2, 0.15, 0.3, 0.1\}$.
6. Explain lossy and lossless schemes for image compression.
7. Explain the fidelity criterion for Lossy image compression.
8. Explain Need for Image compression.

Module 6

(1) Write video Frame classification & various digital video formats?