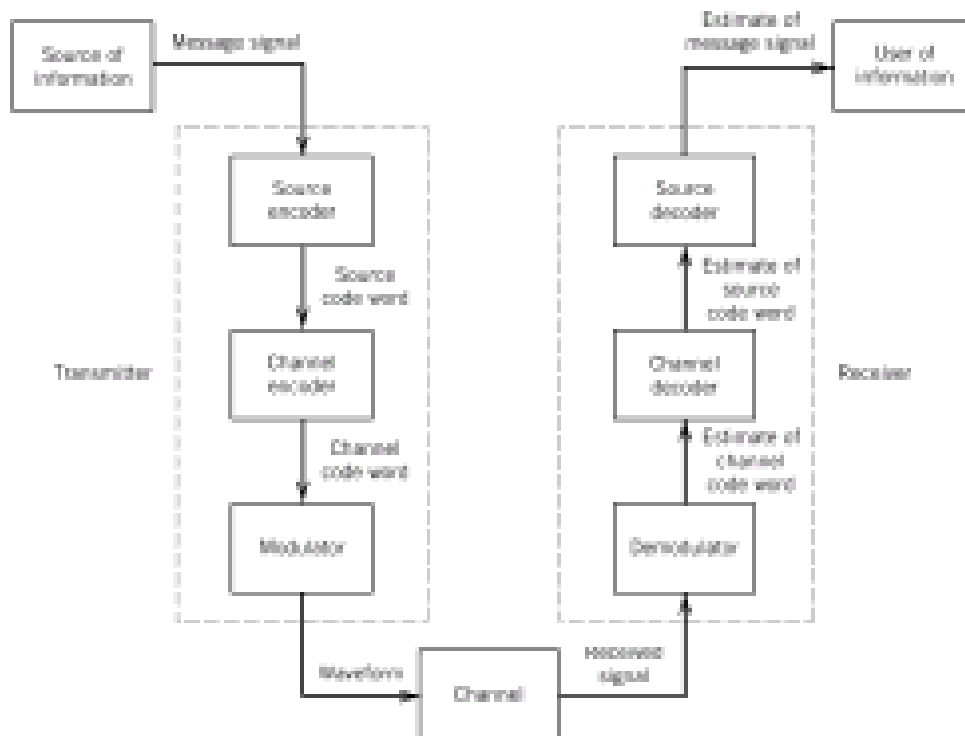


Quiz1 Solution :

1.



2.

525 horizontal lines, decomposed into two 262.5 line interlaced fields.

Completion of each interlace field takes 1/60 second.

Hence, 30 still pictures are shown per second.

Horizontal line-scanning frequency is $262.5/(1/60) = 15.75$ KHz.

3.

Source coding : data compression, reduce the redundant bits and to represent the source information with minimum symbols.

Channel coding : error detection and error correction, add extra bits to the source information in a manner that minimize the error probability or correct the error bits in decoding.

4.

Using the majority rule. If there were more than two bits "1" in the received symbol, the decoder made the decision "1" as source symbol. On the contrary, decode the received symbol "0" as more than two bits "0" exist. Thus, the error correcting ability is 1(bit).