Test 2: Channel coding basics

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1) Explain the main idea of the channel coding.

2) Shortly describe HARQ procedure.

3) Provide examples of the block and continuous codes.

4) What is the net bit rate R_N for gross bit rate $R_b = 1 Mbps$ and code rate $1/2$?

5) Continue following expression to complete syndromic decoding:

$$\mathbf{s} = \mathbf{y} \otimes \mathbf{H} =$$

6) How many bits t can correct (100, 200) RS code?
   Hint: $N = K + 2t$

7) Provide puncturing pattern for [1001] codeword (1/2 convolutional codes) to obtain code rate 2/3.