

Due: February 4, 1999

Please turn in the following 9 problems:

In doing the problems, use where needed our rule that $\text{bandwidth} = 1/\tau$ (approximately, in practice) for a pulse of duration τ

From **1998 Exam 1**, the following problems:

Problems 2, 3, 4, 5, 6

From **1997 Exam 1**, the following problem:

Problem 2

From **Halsall**, Chapter 2:

Problems 2.9, 2.18, 2.19

(Also make sure you know how to do the following problems from Halsall;
do not turn in)

2.8 (Note how Halsall's rule for bandwidth differs from our practical one).

2.11 (b)
(Use Halsall's approach of pp.62-63;
compare results for our approach for finding bandwidth)

2.12 (Using Halsall's worst-case data sequence; this is done in the text book, pp.65-66)
Our approach is easier, just consider each pulse individually; it does not matter
what the polarity is.

2.14 (Multiple access methods - descriptive)

2.15 (b), (c)
(Note that "Transmission Delay" according to Halsall is what we will call the
"Frame Duration". It is the length of time each frame of data bits takes to be
launched into the channel. It is $(\text{frame length in bits}) \div (\text{transmission rate in bps})$ It
is the same as the length of time between the first received bit and last received bit
of the frame, across a single link)