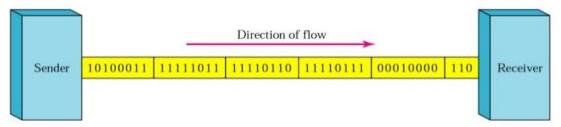
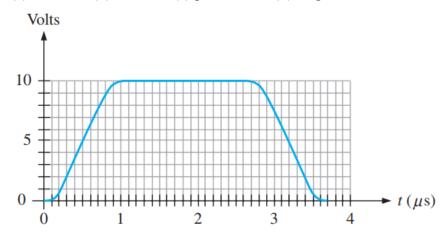
Problem Solving Assignment # 1 [2+2, 3, 2+2+2+2]

- 1. Generate a waveform (time vs state (high/low)) for the following binary numbers.
 - a. 0100101001
 - b. 11101001101
- 2. What is the sequence of numbers that the Receiver receives in the communication shown in the following picture?

Due Date: 16 Feb, 21



- 3. For the pulse shown in Figure, graphically determine the following:
 - (a) rise time (b) fall time (c) pulse width (d) amplitude



- **4. CHALLENGE PROBLEM:** First three students to submit the correct answer from each section (CS-B/E and DF-A) will be rewarded bonus points.
 - (a) Create a new number system with five unique symbols and translate decimal digits from 0 to 12 in this system. This number system should follow the same rules and logic as regular binary & decimal number systems.
 - (b) Replace the letters in your first name into decimal numbers from the following table and use your generated number system to produce a result for the sum of these numbers.

а	b	С	d	е	f	g	h	i	j	k		m
1	2	3	4	5	6	7	8	9	10	11	12	13
					_	-		.,	141			-
n	0	р	q		S	τ	u	_ v	W	Х	У	

Example: Digits: $0, \sim, !, \#, *$

Name: W A Q A R \Rightarrow 23 + 1 + 17 + 1 + 18 = 60

NameSum: 60 = 0!!0 (but you have to show the summation process)