Wireless Local Area Networks, spring 2005. 2. test. 22.3.2005
14:00-16:00 at MTA.

1. Answer **only** to question 1a if you have already made/presented
your practical assignment. In other cases, answer **only** to question
1b. (it's **not allowed** to answer both questions 1a and 1b)
a) Write everything you know and understand about your practical
assignment. (1. practical assignment of LAN course, that is
mandatory for everyone) (6p)
b) Write everything you know and understand about IEEE 802.1X.
(6p)

2. What issues should be taken care of when planning of home
WLAN? (7p)

3. Let's create 4-byte sequence S_i, which consist of numbers from
zero to three:

$$S_i = \quad 0 \quad\quad 1 \quad\quad 2 \quad\quad 3$$
$$\quad\quad S_0 \quad S_1 \quad S_2 \quad S_3$$

We also create 4-byte keysequence K_i, where we repeat the key as
long as K_i is full (let's select bytes 2 and 5):

$$K_i = \quad 2 \quad\quad 5 \quad\quad 2 \quad\quad 5$$
$$\quad\quad K_0 \quad K_1 \quad K_2 \quad K_3$$

Generate encryption key S_t. Encrypt text "HI" ("H" is 01001000
and "I" is 01001001 in binary form). Decrypt text in the receiving
end and check that you got the same "HI" that was sent! (7p)

4. How security is taken care of in WLAN networks? What
vulnerabilities are there in WLAN security? How WLAN security
can be improved? (7p)

You can use pencil, rubber and student-card.