

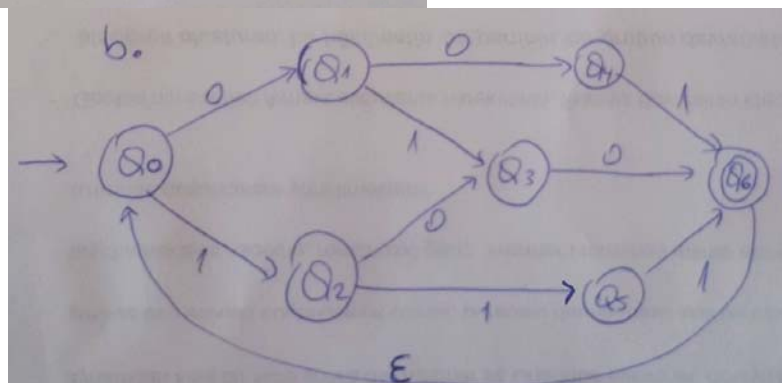
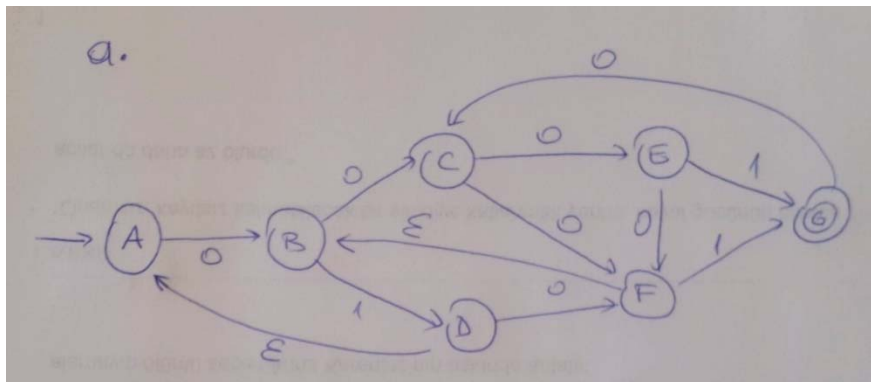
FORMAL LANGUAGES AND ABSTRACT MACHINES

HOMEWORK II – Due Date: 02.11.2015 13.00

Give clear answers to the following problems. Use A4 sized clean paper to submit your homework, otherwise it will not be graded. Submissions will not be accepted after the class starts.

Problems

1. For each of the transition diagrams given below;
 - i. Remove the ϵ – transitions.
 - ii. Find the equivalent DFA.
 - iii. Give the regular expression for the set that is accepted by the DFA.



2. Find NFAs that accept regular expressions given below :
 - a. $((01(10)^*1+10(00)^*0)^*1^*)^*$
 - b. $0((1(01^*0)^*0+00(1^*0)^*1)0)^*$
3. Find the regular grammars that produce the regular sets accepted by the NFAs you've found for problem 2.
4. For the 2-DFA given below, show whether each of the word is accepted or rejected using IDs.

	0	1
$\rightarrow A$	B, R	D, R
B	A, L	C, R
C	D, L	B, R
<u>D</u>	C, R	A, L

- a. 01010101
- b. 10101010
- c. 10111010