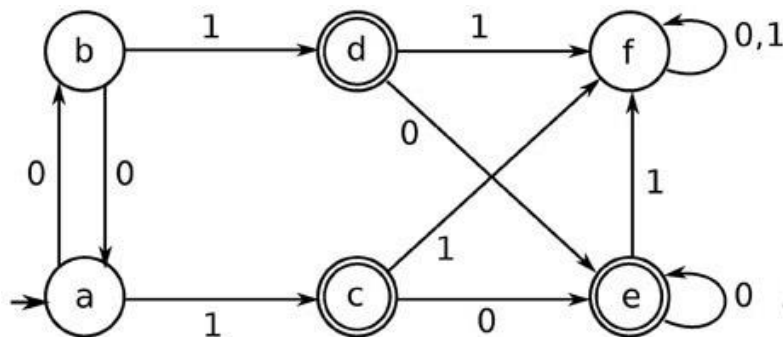


Teori Bahasa dan Otomata
22 Juni 2022
120 minutes (Open Book)
Prof. Rolly Intan, Dr.Eng.

1. Construct CFG for the following languages (30 points)
 - a. $L = \{a^{2m}b^md^{2n+2}e^nc^p | n, m, p \geq 0\}$
 $S = \text{AddDEC}$
 $A = aaAb \mid aab$
 $D = ddD \mid dd$
 $E = eE \mid e$
 $C = cC \mid c$
2. Write a PDA that accepts the set of strings from $(a+b+c)^*$ such that it satisfies $L = \{WcW^RY^RY | W, Y \in (a+b)^*\}$. (25 points)
3. Minimize the following DFA! (20 points)



4. Write a PDA that accepts the set of strings from $(0+1)^*$ such that it satisfies the number of 0 is three times the number of 1. (25 points)