

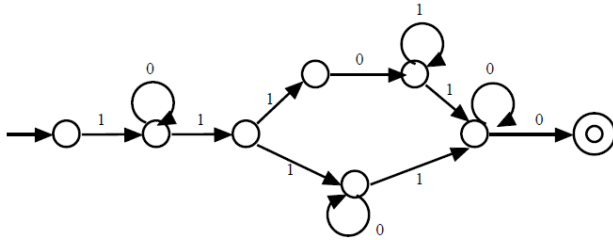
REGULAR EXPRESSIONS

1. What is the length of the smallest string that can be produced by the following regular expression?

$ab^*ba(ab \cup aa^*b)a(b \cup ab^*a)a(ab \cup (a \cup b))$

9

2. Translate the regular expression for the following FSA:



$10^*1(101^*1 \cup 10^*1)0^*0$

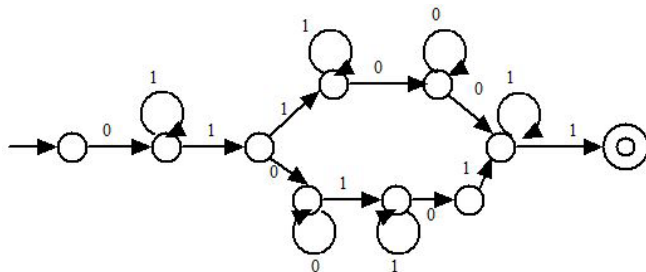
3. Which of the following strings can be produced by the following regular expression?

ab^*baa^*baa

- A. ababaa
- B. aabbbaaaabbaa
- C. abaaabbaa
- D. abbbbaba
- E. abbbbbaa

A, E

4. Translate the following FSA into the Regular Expression it represents:



$01^*1(11^*00^*0 \cup 00^*11^*01)1^*1$