COIS-3050
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Camlin Page
Date / /

Quiz-1

Q1) language (QUES 1) $\Sigma = \{a, b\}$.
$= \{w \mid$ at least one b and an odd number of a's$\}$

language (QUES 1) $= \{ a^{2n+1} b \mid n = 0, 1, \ldots \}$
$= \{ ab, baaa, baaaaa, ba, \ldots \}$

Recursive definition for QUES1

Rule 1 : $ab \in$ QUES1

Rule 2 : If $w \in$ QUES1, then aaw, waa, awa, wb, bw are in QUES1

Rule 3: The only elements in QUES1 are the ones that are constructed by following rules 1 & 2 :

Q2) QUES2 $= \{132, 213, 321\}$

Q3) (a) begin with ba & end with a.

RE : $ba(a+b)^* a$

(b) begin with b & do not contain ab.

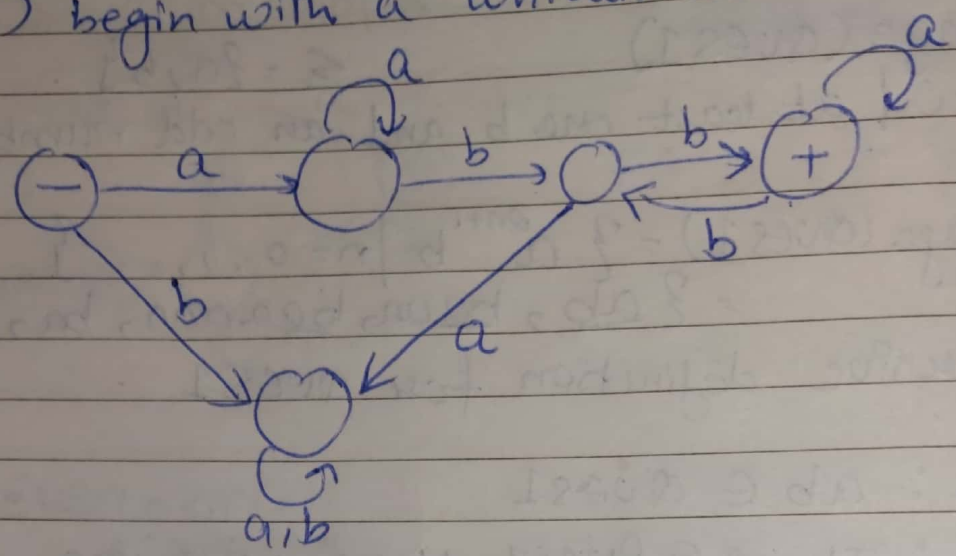
$b(b^* a^*)^*$

(c) end with b and have odd number of letters

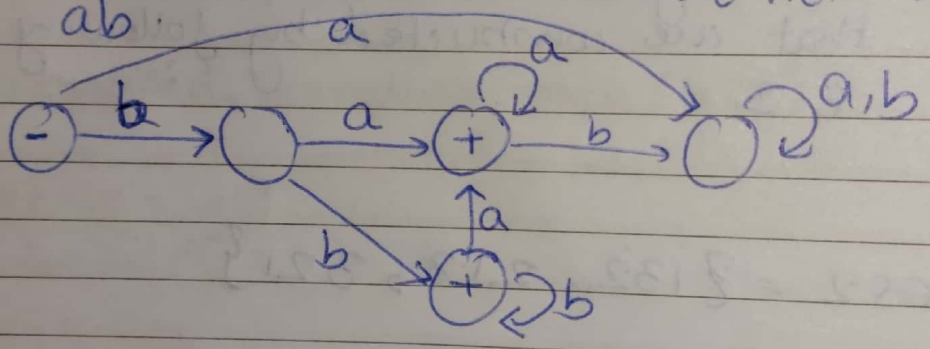
$(aa + ab + ba + bb)^* b$

~~$(\epsilon)b$~~

Q4) (a) begin with a contain bb.



(b) at least one b but do not contain ab.



(c) end with b and have an odd number of letters