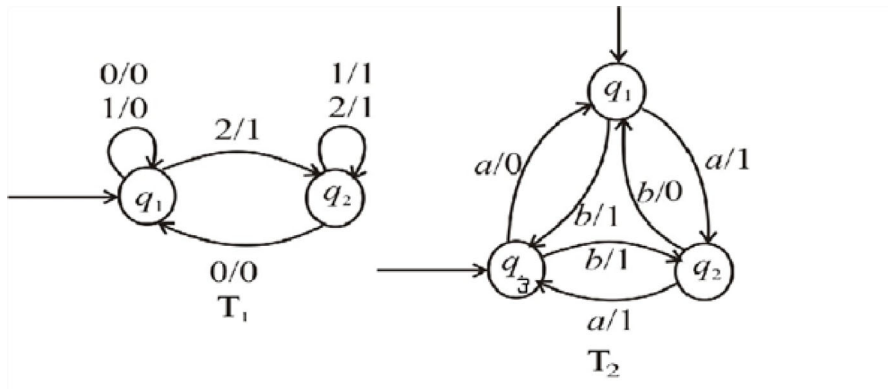Given state diagram of finite state transducers (FST) T_1 and T_2 are as follows

T_1

T_2

(a) Input 011

FST T_1 will enter the following sequence of states on input 011: q_1, q_1, q_1, q_1 and produces the output: 000

(b) Input **211**

FST T_1 will enter the following sequence of state on input 211: q_1, q_2, q_2, q_2 and produces the output: 111

(c) Input 121

FST T_1 will enter the following sequence of states on input **121**: q_1, q_1, q_2, q_2 and produces the output 011

(d) Input 0202

FST T_1 will enter the following sequence of states on input 0202: q_1, q_1, q_2, q_1, q_2

and produces the output: 0101

(e) Input b

FST T_2 will enter the following sequence of states on input b: q_1, q_3 and produces the output: 1

(f) Input $bbab$

FST T_2 will enter the following sequence of states on input $bbab$: q_1, q_3, q_2, q_3, q_2

and produces the output 1111

(g) Input $bbbbbb$

FST T_2 will enter the following sequene of states on input $bbbbbb$:

$q_1, q_3, q_2, q_1, q_3, q_2, q_1$ and produces the output: 110110

(h) Input $\in$

FST T_2 will enter the following sequence of states on input $\in$: q_1

and produces the following output $\in$

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