



CS402 Midterm Paper - Theory of Automata Midterm Examination

CS402 - Theory of Automata - Question No: 1

Alphabet $S = \{a, bc, cc\}$ has _____ number of letters.

One

Two

Three

Four

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CS402 - Theory of Automata - Question No: 2

In which of the following language $\text{Rev}(s) = s$

EQUAL

INTEGER

PALINDROME

FACTORIAL

CS402 - Theory of Automata - Question No: 3

If $S = \{ab, bb\}$, then S^* will not contain

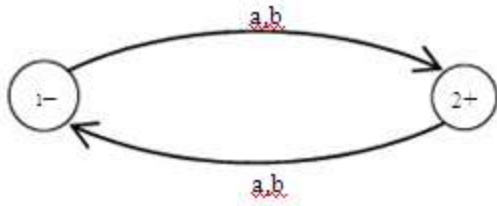
abbbab

bbba

bbbbab

ababbb

CS402 - Theory of Automata - Question No: 4



Above given FA generates the language having strings of _____

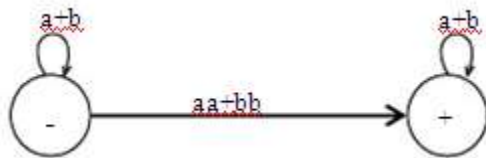
ODD length

EVEN length

Equal number of a's and b's

None of these

CS402 - Theory of Automata - Question No: 5



Above given GTG accepts the language in which strings

Contains double a or double b

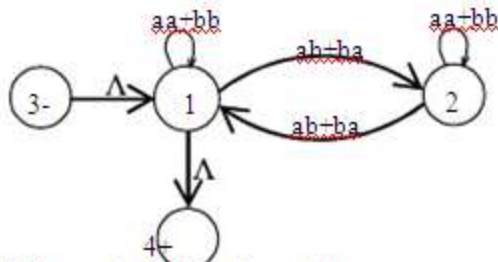
Contains both a and double b

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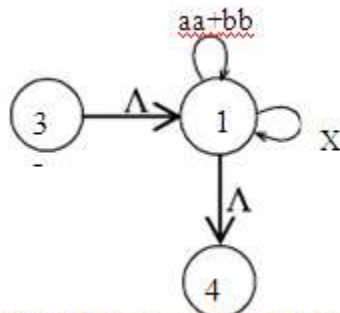
Depends on the alphabet

None of these

CS402 - Theory of Automata - Question No: 6



If above given TG is drawn like



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Then what will + written in place of X be

Then what will + written in place of X be

$(ab+ba)(aa+bb)(ba+ab)$

$(ab+ba)(aa+bb)(ab+ba)$

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

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

CS402 - Theory of Automata - Question No: 7

FA3 expresses r_1r_2 . Then initial state of FA3 will consist of

Initial state of FA2

Initial state of FA1

Initial states of both FA1 & FA2

Depends on FA's

CS402 - Theory of Automata - Question No: 8

FA3 expresses r_1r_2 . Then there will be at least one final state of FA3 that consist of final state of FA1 and initial state of FA2.

True

False

Depends on language

None of these

CS402 - Theory of Automata - Question No: 9

Two machines are said to be equivalent if they print the same output string when the different input string is run on them

True

False

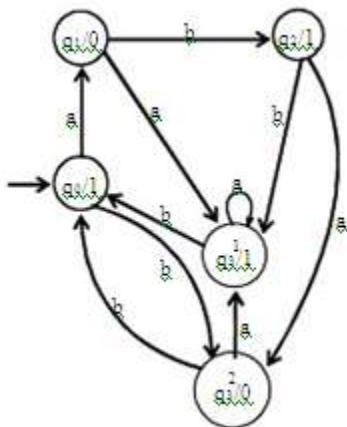
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Depends on language

May be or may not be

CS402 - Theory of Automata - Question No: 10

Running the string abbabbba on this Moore machine. The outputs will be_____



101111010

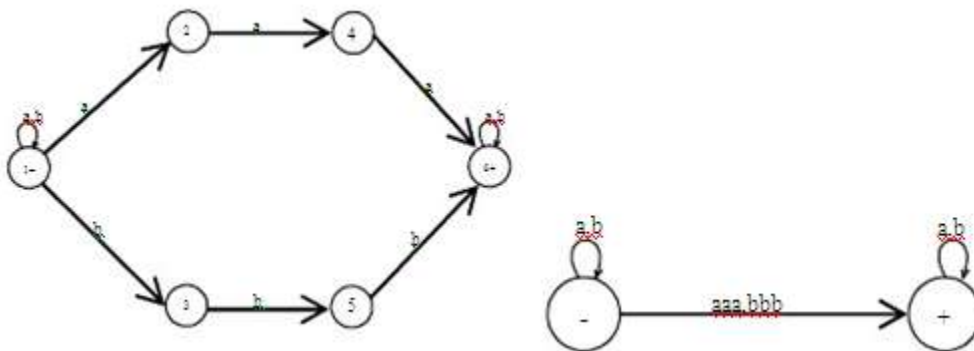
01111010

01011110

01010101



CS402 - Theory of Automata - Question No: 11



Above given TG's are _____.

None of these

Equivalent

Non-equivalent

TG's are not valid

CS402 - Theory of Automata - Question No: 12

TG can have more than one initial state.

True

False

Depends on alphabets

None of these

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