LNCT University Bhopal

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Enroll No...................

[Total No. of Printed pages: 1]

Class Roll No..................

First Mid Semester Examination, 2024

Subject Name : THEORY OF COMPUTATION [CS-303]

Branch: CS Semester: 3rd

Time 1:30 Hrs

Note: All questions are compulsory and have internal choice

Max. Marks 20

Q.1 Construct a Finite Automata which accept all strings in {a,b} that start with (1) bab (2) bba

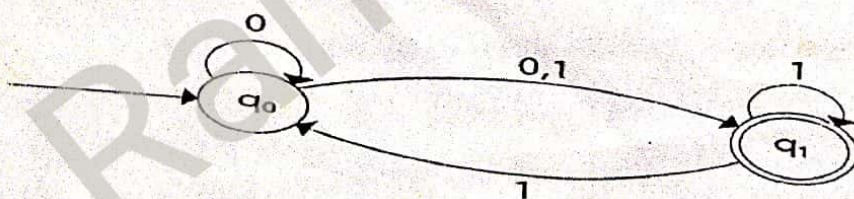OR   [5 marks]

Q.1 Construct Mealy machine that gives 2's complement of a binary string Assume that string is read from LSB to MSB with carry discarded. [5 marks]

Q.2 Construct a Moore machine that take all string over{a,b} as input & print 1 as output for every occurrence of 'aab' as substring.[5marks]

OR

Q.2 Design a DFA that accepts all binary numbers divisible by 3. [5marks]

Q3. Convert the given NFA to DFA.

[5marks]

OR

Q3. Describe 2way DFA and minimization methods of automata. [5marks]

Q4. Differentiate between DFA and NFA

OR   [5marks]

Q4. Explain the Closure properties of Regular language.