Amity University Madhya Pradesh
Amity School of Engineering and Technology

Home Assignment-1

Department: Computer Science and Engineering   Semester: IV
Subject: Formal Languages and Automata Theory   Subject Code: IT401

Max. Marks: 10

Q1: Design a non-deterministic finite automaton that accept all strings of length 2 over the alphabet set {0, 1}. **(2 Marks)**

Q2: Construct a deterministic finite automaton that accept all strings that does

not contain the string **aabb** over the alphabet set {a, b}. **(3 Marks)**

Q3: Convert the following context free grammar into Chomsky normal form.

(2 Marks)

     S ☐ BS

     S ☐ BBS

     B ☐ SB

     B ☐ aa

Q4: Convert the following finite automata into regular expression using Arden's theorem. **(3 Marks)**