Department of Computer Science & Engineering
National Institute of Technology Srinagar

Theory of Computation $\qquad$ 6th Sem $\qquad$ Spring 2020

Assignment No. 1 $\qquad$ Due date: 15-05-2020

Note: Assignment must be hand written.

Q1. Draw a DFA to accept string of 0's and 1's ending with string 011.

Q2. Obtain a DFA to accept strings of a's and b's having
- (i) exactly one **a**,
- (ii) atleast one **a**, and
- (iii) not more than three **a's**.

Q3. Obtain a DFA to accept
- (i) even number of **a's,** and
- (ii) odd number of **a's.**

Q4. Obtain a DFA to accept strings of **0's, 1's** and **2's** beginning with a **0** followed by odd number of **1's** and ending with a **2.**

Q5. Obtain a DFA to accept strings of **a's** and **b's** with
- (i) atmost two consecutive **b's**.
- (ii) having odd number of **a's**.
- (iii) having odd number of **b's**.
- (iv) having odd number of **a's** and **b's**.

Q6. Obtain a DFA to accept the Language $L = \{w : |w| \bmod 5 \neq 0\}$ on $\sum = \{a, b\}$.