## <u>Unit:-1</u>

- 1. Write the difference between DFA and NFA with one example?
- 2. Give a NFA for  $\Sigma = \{a,b\}$  that accepts any string with 'ab' as a sub String. Hence construct equivalent DFA?
- 3. Design a DFA to accept string with c and d such that no of d's are divisible by 4?
- 4. What are the limitations of finite state machine and also give the applications of finite state machine?
- 5. Design a Moore machine for 2's complement if binary number?
- 6. Give  $\varepsilon$ -NFA for string of the form 01\*0\*1 over the alphabet  $\Sigma = \{0,1\}$ . Convert it to NFA without  $\varepsilon$ -Moves.