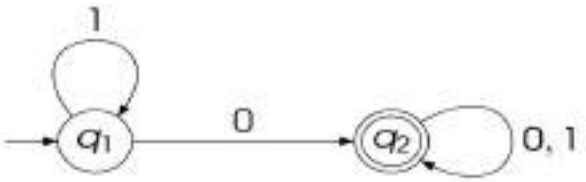
IMPORTANT QUESTIONS OF THEORY OF COMPUTATION

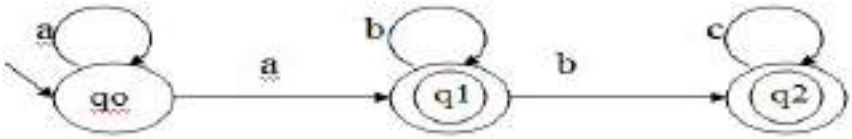
UNIT I

Q1. Design Deterministic Finite Automata for the expression $a^*b^*c^+d^+$

Q2. Design Regular Expression for the given DFA using Arden Theorem.



Q3.Convert the NFA in to DFA



Q4. Design DFA to accept 00(00)*11.

Q5. Explain Arden theorem importance with example.

Q6. Explain closure properties of regular expression.

UNIT II

Q1. Define Deterministic Finite Automata (DFA) & Non Deterministic Finite Automaton (NFA).

Q2. How to convert NFA with null moves to DFA, explain with an example.

Q3. Construct DFA for the given expression

(a) a^+b^+ (b) a^*b^*c (c) $a^*\ b^*\ c^*$

Q4. Design a finite state machine that will accept even numbers of '0'and odd number of 1's.

Q5. Design a finite state machine that will accept odd numbers of '0'or even number of 1's.

Q6. Proof that Finite Automat is Language Acceptor.