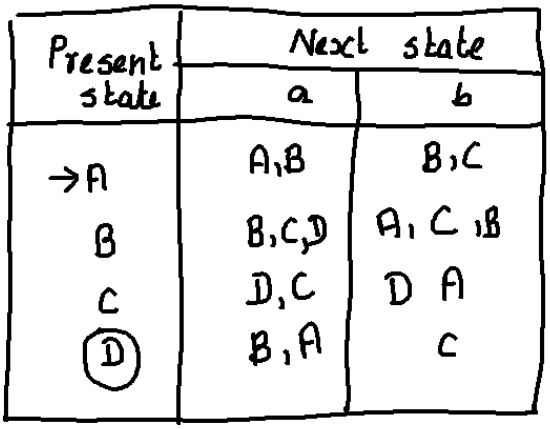
LOVELY PROFESSIONAL UNIVERSITY
COURSE CODE: CSE322
CA1- ASSIGNMENT QUESTIONS

Note

i. Each question carries 5 Marks.
ii. Attend all 6 questions
iii. It is compulsory to submit scanned handwritten assignment in UMS on or before 26th August 2020.

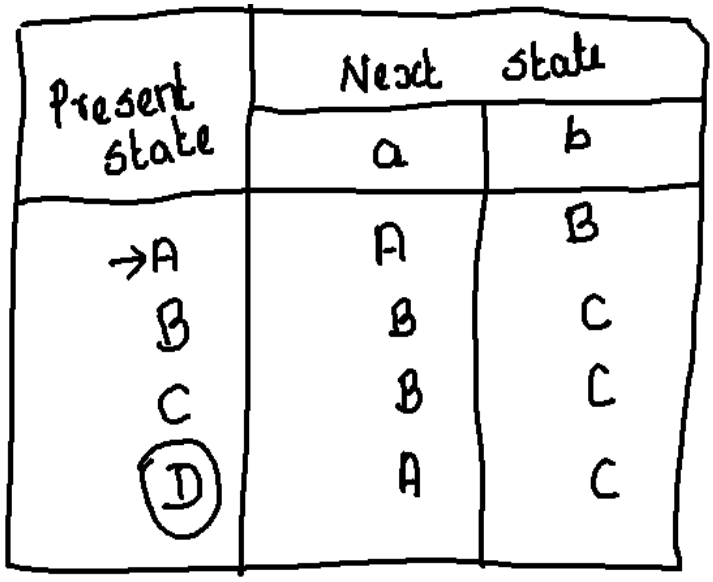
Set 6

1. Design DFA for the language L, in which third character of the strings should be 'c' and also last character of the strings should be 'ac' over the set ∑={a,b,c}
2. Convert the following NFA to DFA



Present state	Next state	
	a	b
→A	A,B	B,C
B	B,C,D	A, C ,B
C	D,C	D A
(D)	B,A	C

3. Minimize the following DFA



Present state	Next state	
	a	b
→A	A	B
B	B	C
C	B	C
(D)	A	C

4. Convert the following moore machine to mealy machine

Present state	Next state		Output
	a	b	
→ q_0	q_4	q_2	1
q_1	q_1	q_0	1
q_2	q_0	q_4	0
q_3	q_3	q_2	1
q_4	q_4	q_1	0

5. Convert the following mealy machine to moore machine

Present state	input = a		input = b	
	Next state	Output	Next state	Output
→ A	B	0	A	1
B	C	1	D	1
C	D	1	B	1
D	E	1	A	1
E	A	0	E	0

6. Design NFA for the Language L, which accepts the strings in which third character of the string should be '1', over the set ∑={0,1}