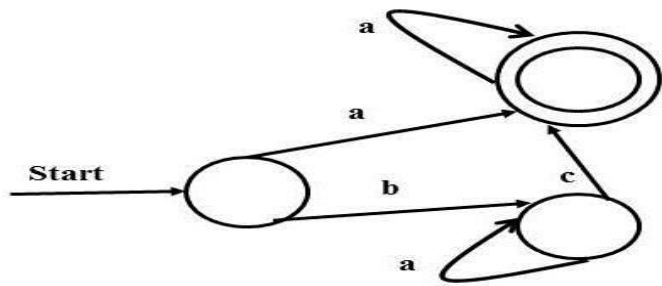
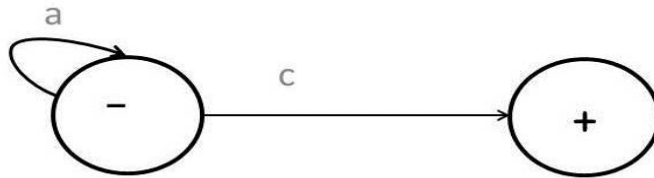


2.1 Write the regular expression for the following NFA:



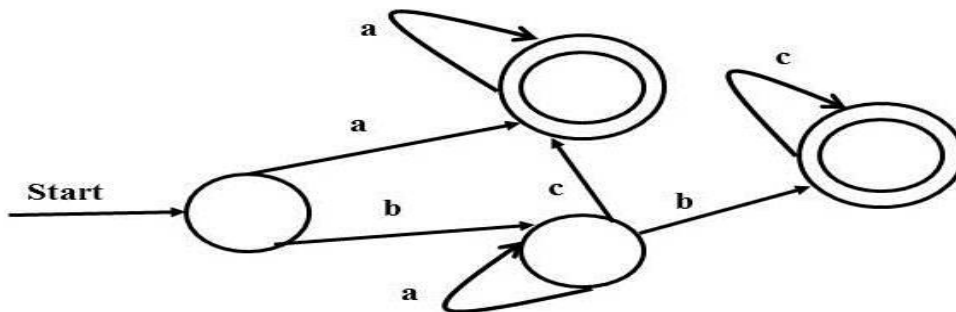
$aa^*+ba^*ca^*$

2.2 Prove that $L_2 = \{ a^*c \}$ is a regular language (by providing an automaton for L_2).



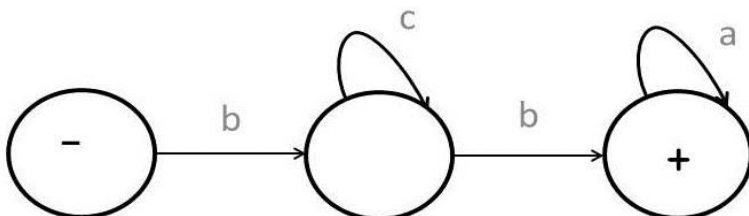
This NFA defines L_2 ; therefore, L_2 is a regular language.

2.3 Write the regular expression for the following NFA:



$aa^*+ba^*ca^*+ba^*bc^*$

2.4 Prove that $L_4 = \{ bc^*ba^* \}$ is regular (by providing an automaton for L_4).



This NFA defines L_4 ; therefore, L_4 is regular.