BRAINWARE GROUP OF INSTITUTIONS - SABITA DEVI EDUCATION TRUST
THEORY ASSIGNMENT 1 (4th Semester) 2019
CS402 – Formal Language & Automata Theory

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1. (a) What is Automata?
(b) How many types of Automata are there?
(c) Define an NDFA.
(d) What is RE?
(e) Define a Grammar.
(f) What is transition table?
(g) Define an DFA.
(h) What is dead/trap state?

2. Construct an NFA(with Ɛ transition) using Thompson's construction rules, of this regular expression: $(a|b)^*abb$. Convert this NFA to it's corresponding DFA using indirect conversion method. Minimize the DFA(if possible).

3. If L(r) = set of all strings over S = {0,1} ending with '011', then find r.

4. Using a regular expression, represent the language defined over S = {0,1,2},such that every string from the language contains 'any number of 0's followed by any number of 1's followed by any number of 2's.