DFA Practice Problems

Try to solve problems from Machine E_{26} to E_{30} (see lecture-4 final pdf) for better practice in online assignment-1.

There are some more practices are given below:

1. Design DFA's accepting the following languages over the alphabet {0, 1}
   - 1.1. The set of all strings ending with 00.
   - 1.2. The set of all strings with three consecutive 0's.
   - 1.3. The set of strings with 011 as a substring.
   - 1.4. The set of strings that either begin or end with 01.
   - 1.5. The set of strings such that the number of 0's is divisible by 5
   - 1.6. The set of strings such that the number of 1's is divisible by 3.
   - 1.7. The set of strings with an even number of 0's and an odd number of 1's.
   - 1.8. The set of strings with 01 or 10 as substring.
   - 1.9. The set of strings with no consecutive 0's.
   - 1.10. The set of strings with alternate 0's and 1's.
   - 1.11. The set of all binary strings which is a multiple of 5.
2. Design DFA's accepting the following languages over the alphabet {a, b, c}
   - 2.1. The set of strings with abca as a substring.
   - 2.2. The set of strings with abababa as a substring.

3. Design DFA's accepting the following language
   - 3.1 The set of strings over {a, b, c} with equal number of a's and b's.
   - 3.2 The set of strings over {a, b, c} with higher number of a's than b's.