

1.
 - (a) Yes. M accepts 0100.
 - (b) No. M rejects 011.
 - (c) No. No input string is given.
 - (d) No. R is not a DFA.
 - (e) No. $L(M)$ is not empty.
 - (f) Yes. By definition, $L(M) = L(M)$.