

FCS Midterm Q4

(a) 101101

(b) 10011000

(c) The automaton starts with state A, on which it stays as long as it reads 1 from the input string.

Once it reads 0, it moves to state B on which it stays as long as it reads 0 from the input string.

Once it reads 1, it moves to state C on which it stays as long as it reads 1 from the input string.

Once it reads 0, it moves to state D on which it stays as long as it reads 0 from the input string.

Once it reads 1, it moves to the accepting state E, on which it stays forever.

(d) $1^*0^+1^+0^+1(0 \cup 1)^*$