

You have to use the designated spaces for your answers. No extra pages will be provided.

**Problem 1: Converting Regular Expressions to NFAs (6 points)**

Convert the following regular expression over  $\Sigma = \{a, b, c\}$  into an equivalent NFA.

$$bc^* \cup (b \cup c^* (a \cup c)^*)^*$$

**Problem 2: Regular Expressions (4 points)**

Give a regular expression for the following language over  $\Sigma = \{0, 1\}$ .

$$L = \{w : w \text{ contains an even number of 0s and ends with a 1}\}$$