CS605 Tuesday's self-assessment sheet

Name: _____

Please mark either "A" or "B" or "C" for each of the problems below.

A - "I completed this problem"
B - "I knew I could do it so I skipped it"
C - "I was not able, or did not have enough time, to complete this problem"

Expand the languages defined by the following expressions.

i. $\emptyset \cup \{aa, ab\}$: ___
ii. $\{e\}^*$: ___
iii. $\emptyset^*$: ___
iv. $\emptyset \circ \{a, b, c\}$: ___
v. 2^L, where the language $L = \{e, ab\}$: ___
vi. the regular expression $(0 \cup e)1$: ___

Expand the languages defined by the following expressions.

i. $\emptyset$: ___
ii. $\emptyset \circ \{\emptyset\}$: ___
iii. $\emptyset \circ \{a, b\}$: ___
iv. $\{\emptyset\} \circ \{a, b\}$: ___
v. $\{e\}^*$: ___
vi. $\{e\} \circ \{a, b\}^*$: ___

State whether each of the following is true or false.

i. $\emptyset \in \emptyset$: ___
ii. $\emptyset = 2^{\emptyset}$: ___
iii. $\{a, b\} \subseteq 2^{\{a,b,\{a,b\}\}}$: ___

Let $\Sigma = \{a, b, c\}$ and let $L = \{w : w \in \Sigma^*\}$. Write down the first five elements in the lexicographical ordering of L, where Σ has the usual alphabetical ordering (a, b, c). : ___

Formulate the problem of finding the largest integer in a list of integers as a language acceptance problem: ___

Lab Sheet 1 Machine 1.1 : ___
1.2 : ___
1.3 : ___
1.4 : ___
1.5 : ___
1.6 : ___
1.7 : ___
1.8 : ___
1.9 : ___
1.10 : ___
1.11 : ___