The sample questions below are intended to give you a sense of the forms of some of the types of questions that you might see in exams in the course. These samples are not intended to cover all types of questions that may be used, nor are they intended to give an accurate picture of the level of difficulty or material covered.

1. For each subquestion, mark the appropriate box to indicate whether there exist none, exactly one, or more than one possible objects that fit the description. If you check “none”, give a brief explanation. If you check “Exactly one”, provide one example, and if you check “More than one”, provide two examples.

(a) A binary tree containing a node with three children.
   - None □
   - Exactly one □
   - More than one □

(b) An ADT that can store any type of data.
   - None □
   - Exactly one □
   - More than one □

2. For each subquestion, determine whether or not the statement is true, and mark the appropriate box. Provide a brief justification of your answer.

(a) A tree can contain more leaves than roots.
   - True □
   - False □

(b) Order notation was invented in order to make students suffer.
   - True □
   - False □