1. Assume that you have a templatized `Latte` class, and another `coffee` class. Which of the following correctly declares a variable called `beverages` which is a dynamic array of type `Latte` whose parameterized type is a `coffee` pointer?

    A. [Your Answer] None of the other options is correct.
    B. More than one of the other options are correct.
    C. `Latte * beverages = new coffee[size];`
    D. [Correct Answer] `Latte<coffee *> * beverages;`
    E. `Latte<coffee> * beverages;`

2. Suppose that the set of loans made by a library is to be represented in a data structure. Each book in the library may be electronically checked out by multiple patrons at a time. Moreover, a single patron may be able to check out multiple books. To be able to efficiently determine whether a patron has a given book, the library data structure is best represented by a dictionary where:

    A. the books are the keys and the patrons are the values.
    B. [Your Answer] the patrons are the keys and the books are the values.
    C. unique indices starting from 0 are the keys and the pair (books,patrons) is the value.
    D. None of the other answers are correct.
    E. [Correct Answer] a concatenated string `books+patrons` is the key and a boolean is the value.

3. How many data structures in this list can used to implement a Dictionary so that all of its functions have a worst case running time strictly better than $O(n)$?

- Stack
- Queue
- Binary-Search Tree
- AVL Tree
- Linked List

    A. 4
    B. 2
    C. 3
    D. 5
    E. [Correct Answer] [Your Answer] 1

4. Which of the following collection of function signatures corresponds to the Dictionary ADT?

    A. Exactly 2 of the other items can be considered to be Dictionaries.
    B. `void insert(key, value); void remove(key, value); void find(key);`
    C. `void insert(key, value); key remove(value); void find(value);`
    D. None of the other items describe a dictionary.
    E. [Correct Answer] [Your Answer] `void insert(key, value); void remove(key); value find(key);`