University of Toronto, Department of Electrical and Computer Engineering
ECE 1724-F1 — Performant Software Systems with Rust

Quiz 2 — Answer Key

Wednesday, September 30, 2026

1. Ⓑ **A clone is independent of a moved value.**

`saved` owns a separate copy. Moving `original` into `current` does not affect `saved`, and appending changes only `current`. The output is `teal teal!`. (Book 4.1.)

2. Ⓓ **Mutation through a borrowed parameter.**

`extend` borrows `message` mutably and appends to the caller's string. It does not take ownership. The borrow ends before the print, which produces `go now`. (Book 4.2.)

3. Ⓐ **An immutable borrow is still needed.**

`view` is used after `push`, so its immutable borrow overlaps the mutable borrow required by the append. The program fails to compile and prints nothing. `push` accepts a character, so the argument itself is valid. (Book 4.2 and 8.2.)

4. Ⓒ **The slice's last use precedes mutation.**

The first print produces `cat` and is the last use of `word`. The immutable borrow ends there, permitting `clear()`. The emptied string has byte length `0`. No copy of the substring is needed. (Book 4.2–4.3.)

5. Ⓑ **Strings do not support integer indexing.**

`text[0]` is not valid Rust, even for an ASCII-only string. It yields neither a character nor a byte. This is a compile-time error, not a run-time bounds error. (Book 8.2.)

Sources: *The Rust Programming Language*, Chapter 4, Section 8.2, and Section 5.1.