Explain what happened in Step A (i.e., tell which processes ran and the order in

which they ran to produce the observed outcome.

Without coordination, producer (prio 10, resumed first) runs before (FIFO scheduler, Ch. 7 Eat): generates 0-800 even quickly, seq = 800. Consumer (prio 10) starts next, reads seq = 800 ≠ 0, error and return. Race condition: consumer loses initial sequence.

Explain what happened in Step B. (i.e., tell the order in which processes ran and

why the consumer did or did not receive all values in the sequence).

Producer runs first (FIFO), writes initial values; consumer intercalates, but when taking mutex it sees partial value (564) ≠ expected (0), error. Processes alternate accesses by mutex, but without coordination, consumer loses sequence start.

Explain what happened in Step C (i.e., tell the order in which processes ran and

why the consumer did or did not receive all values in the sequence).

Consumer (prio 12 >10) runs first, ve seq = -1 ≠ expected 0, error. Processes run consumer then producer; Without order coordination, Consumer fails before Producer writes.

Explain what happened in Step D. (i.e., tell the order in which processes ran and

why the consumer did or did not receive all values in the sequence).

Producer (prio 12 >10) runs first, fills seq = 800 completely. Consumer run next, see seq = 800 ≠ 0, error. Processes: producer then consumer; Without order coordination, Consumer fails at startup.

Explain what happened in Step E. (i.e., tell the order in which processes ran and

why the consumer did or did not receive all values in the sequence).

Processes alternate: producer produce (wait empty, write, signal full), consumer consume (wait full, read, signal empty. Traffic light forced order: producer first (empty = 1), then consumer (full = 0 initial blocks); alternate until the end, consumer receives all values in order.