Solutions

2.1

- Registers, PC, memory mappings, open-file table ✓.

2.2

- The page tables (with the TLB as their cache) ✓.

2.3

- open, read, write (close also) ✓.

3.1

- A faults → blocked; scheduler runs B; disk completes → A ready; scheduler resumes A with its saved state ✓.
- Preserved: registers, PC, mappings, files – the CPU cache is shared hardware and is merely cold ✓.
- The CPU runs B during A's wait – a page fault creates useful I/O concurrency ✓.
- States: running → blocked → ready → running ✓.

3.2

- Isolation gone: any bug in one process could read or corrupt another's memory ✓.
- Illusion gone: total program size capped by physical RAM – big working sets fail to load ✓.
- Convenience gone: every load would need relocation against the machine's actual physical layout ✓.

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