

Quiz 4 (Oct 2, 2025)

Name:

ANSWER

NetID (e.g., ap191):

Please write your answers clearly and keep them brief.

Problem	Score
Question 1	/ 2.5
Question 2	/ 5
Question 3	/ 2.5
Total	/ 10

1. What was the main purpose of the Therac-25, that is what type of therapy did it provide? [2.5 points]

Radiation therapy. (Anything equivalent was accepted.)

2. The concurrency bug that affected the Therac-25 was also present in the Therac-20, which had been in use for much longer. Why was the bug not noticed in the Therac-20? [5 points]

The Therac-20 had hardware interlocks to check dosage. This additional safeguard ensured that no patients were harmed due to the bug.

3. A physicist at the University of Chicago Joint Center for Radiation Therapy eventually reproduced the concurrency bug in the Therac-20. How did the bug manifest in this machine, that is what effect did it have? [2.5 points]

Blown fuses.

