

MCQ 1

Question: What is the primary purpose of mutation testing?

- A) To optimize the performance of the original program.
- B) To evaluate the effectiveness of test cases.
- C) To introduce bugs into the code to make it more resilient.
- D) To measure the code coverage of the test suite.

Correct Answer: B

MCQ 2

Question: Which type of mutation testing focuses on changing logical operators in conditional statements?

- A) Statement Mutation Testing
- B) Value Mutation Testing
- C) Logical Mutation Testing
- D) Program Mutation Testing

Correct Answer: C

MCQ 3

Question: A mutant is considered "killed" when:

- A) A test case passes against the mutated program.
- B) A test case fails against the mutated program.
- C) The mutated program compiles without errors.
- D) The original program passes all test cases.

Correct Answer: B

MCQ 4

Question: According to the text, mutation testing can be beneficial during which software development activity?

- A) Requirements gathering
- B) Code reviews
- C) Deployment
- D) User acceptance testing

Correct Answer: B

MCQ 5

Question: Which industry application of mutation testing is mentioned in relation to trajectory calculations?

- A) Healthcare Systems
- B) Financial Systems
- C) Defense Systems
- D) E-commerce Platforms

Correct Answer: C

MCQ 6

Question: What does mutation testing help identify besides weak test cases?

- A) Unused code blocks
- B) Redundant test cases
- C) Performance bottlenecks
- D) Security vulnerabilities

Correct Answer: B