Software Engineering Bootcamp - MCQ Quiz

This quiz contains 10 multiple-choice questions based on the Q&A sections from all lessons in the bootcamp.

Instructions:

- Each question has four options
- Only one answer is correct
- Read each question carefully before answering

* Indicates required question

1. Email *

2. **Please enter your full name:** *

3. **What is the primary purpose of the planning phase in the Software Development Life Cycle (SDLC)?** 10 points

   Mark only one oval.

   - To write code and implement features
   - To gather and document project goals and requirements
   - To test the software for bugs
   - To deploy the software to production

4. **What's the difference between *git clone* and *git pull*?** 10 points

Mark only one oval.

- ◯ They are the same command with different names
- ◯ `git clone` creates a new local copy of a remote repository; `git pull` updates an existing local repository
- ◯ `git clone` is for private repositories; `git pull` is for public repositories
- ◯ `git clone` downloads code; `git pull` uploads code

5. **Which logging level should you use for a message that indicates something unexpected happened but the program can continue running?** 10 points

Mark only one oval.

- ◯ DEBUG
- ◯ INFO
- ◯ WARNING
- ◯ ERROR

6. **In TDD, what should you do immediately after writing a test that fails?** 10 points

Mark only one oval.

- ◯ Write another test to cover more scenarios
- ◯ Refactor existing code to improve its structure
- ◯ Write the minimum code necessary to make the test pass
- ◯ Run all existing tests to ensure nothing broke

7. **In a typical CI pipeline, what happens immediately after the code is cloned from the repository?** 10 points

Mark only one oval.

- The build/compile phase begins
- Automated tests are executed
- Code is packaged into containers
- The code is deployed to production

8. **You're debugging a function that sometimes returns incorrect results. Which approach should you try FIRST?** 10 points

Mark only one oval.

- Rewrite the entire function from scratch
- Add print statements throughout the function to see what's happening
- Try to reproduce the bug with specific inputs that consistently trigger it
- Ask a colleague to fix it for you

9. **A security audit identified multiple vulnerabilities in your web application. Which vulnerability should you prioritize fixing FIRST based on potential impact and exploitability?** 10 points

Mark only one oval.

- SQL injection should always be fixed first regardless of permissions
- Password storage weaknesses affect all users and should be fixed immediately
- XSS vulnerabilities are the most common and should be prioritized
- Insecure deserialization can lead to remote code execution and complet

10. **Your team is building a new feature with limited time and must prioritize testing efforts. According to the testing pyramid, which approach provides the best balance?** 10 points

Mark only one oval.

- ◯ Write only end-to-end tests that verify complete user workflows
- ◯ Write many unit tests, some integration tests, and a few end-to-end tests
- ◯ Write equal numbers of unit, integration, and end-to-end tests
- ◯ Write only unit tests since they're fastest and easiest

11. **Your e-commerce platform shows product prices from an inventory database. Currently, every page load queries the database directly for real-time prices, causing slow page loads (2-3 seconds) during peak traffic. You're considering adding a Redis cache layer with a 5-minute TTL (time-to-live). What trade-off are you making?** 10 points

Mark only one oval.

- ◯ Trading consistency for performance
- ◯ Trading security for performance
- ◯ Trading availability for scalability
- ◯ Trading maintainability for flexibility

12. **Your team wants to implement CI/CD but has no automated tests. What's the best approach?** 10 points

Mark only one oval.

- ◯ Implement full CI/CD immediately and write tests later
- ◯ Write tests for critical functionality first, then implement basic CI, then add CD gradually
- ◯ Skip testing and rely on manual QA instead
- ◯ Only implement CD without CI since deployment is more important