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**Marks** 19.00/20.00

**Grade** 95.00 out of 100.00

### Question 1

Correct

Mark 1.00 out of 1.00

Extreme Programming (XP) emphasizes on:

- ☒ a. Pair programming and frequent releases ✓
- ☐ b. Extensive testing before coding
- ☐ c. Following strict deadlines
- ☐ d. Limited customer involvement

### Question 2

Correct

Mark 1.00 out of 1.00

Which of the following best describes an effective quality assurance (QA) process in agile development?

- ☒ a. QA is integrated continuously throughout the development process ✓
- ☐ b. QA is conducted only at the end of each sprint
- ☐ c. QA is handled by a separate team from the developers
- ☐ d. QA only focuses on performance testing

### Question 3

Correct

Mark 1.00 out of 1.00

Who is primarily responsible for system deployment and ensuring its availability?

- ☒ a. System Administrator ✓
- ☐ b. Database Administrator
- ☐ c. Quality Assurance Tester
- ☐ d. Business Analyst

**Question 4**

Correct

Mark 1.00 out of 1.00

Which of the following is a benefit of blockchain in software security?

- ☒ a. Immutable data storage ✓
- ☐ b. Centralized access control
- ☐ c. High latency transactions
- ☐ d. Reduced encryption standards

**Question 5**

Correct

Mark 1.00 out of 1.00

What role does version control play in software maintenance?

- ☒ a. Tracking changes and managing versions ✓
- ☐ b. Deleting old versions
- ☐ c. Avoiding updates
- ☐ d. Enhancing hardware

**Question 6**

Correct

Mark 1.00 out of 1.00

What is the primary role of the tests written during the TDD process?

- ☒ a. To verify individual units or components of the software ✓
- ☐ b. To test the overall performance of the system
- ☐ c. To verify the system requirements
- ☐ d. To ensure that user interfaces are functional

**Question 7**

Correct

Mark 1.00 out of 1.00

What diagram type is best suited for showing object behaviors?

- ☒ a. State diagram ✓
- ☐ b. Component diagram
- ☐ c. Use case diagram
- ☐ d. Deployment diagram

**Question 8**

Correct

Mark 1.00 out of 1.00

Which of the following is a principle of good software design?

- ☒ a. High cohesion and low coupling ✓
- ☐ b. High coupling and low cohesion
- ☐ c. High cohesion and high coupling
- ☐ d. Low cohesion and low coupling

**Question 9**

Correct

Mark 1.00 out of 1.00

The most important reason for implementing secure coding practices in software engineering is:

- ☒ a. To prevent unauthorized access and data breaches ✓
- ☐ b. To make the software faster
- ☐ c. To increase software complexity
- ☐ d. To improve the software's user interface

**Question 10**

Correct

Mark 1.00 out of 1.00

A DevOps Engineer is primarily responsible for:

- ☒ a. Managing software releases and automation ✓
- ☐ b. Designing user interfaces
- ☐ c. Writing technical documentation
- ☐ d. Creating test cases

**Question 11**

Correct

Mark 1.00 out of 1.00

Which of the following methodologies focuses on continuous delivery and integration?

- ☒ a. DevOps ✓
- ☐ b. Agile
- ☐ c. Waterfall
- ☐ d. Spiral

**Question 12**

Correct

Mark 1.00 out of 1.00

What type of coupling is the strongest and least desirable in software design?

- ☒ a. Content coupling ✓
- ☐ b. Control coupling
- ☐ c. Data coupling
- ☐ d. Stamp coupling

**Question 13**

Correct

Mark 1.00 out of 1.00

In a use case diagram, \_\_\_\_\_ are the external entities interacting with the system.

- ☒ a. Actors ✓
- ☐ b. Components
- ☐ c. Classes
- ☐ d. Objects

**Question 14**

Correct

Mark 1.00 out of 1.00

A well-implemented security system in software development has no impact on the overall performance of the software.

- ☒ a. FALSE ✓
- ☐ b. TRUE

**Question 15**

Correct

Mark 1.00 out of 1.00

What does AI-driven code generation primarily rely on?

- ☒ a. Machine Learning algorithms ✓
- ☐ b. Manual scripts
- ☐ c. Static libraries
- ☐ d. System logs

**Question 16**

Correct

Mark 1.00 out of 1.00

In the context of software maintenance, what is the primary purpose of effort estimation?

- ☒ a. Optimizing resource utilization and timeline accuracy ✓
- ☐ b. Managing potential risks and unforeseen costs
- ☐ c. Prioritizing and planning required modifications
- ☐ d. Streamlining feature implementation and innovation

**Question 17**

Correct

Mark 1.00 out of 1.00

AI-driven development can enhance DevOps practices by:

- ☒ a. Automating deployment strategies ✓
- ☐ b. Slowing down CI/CD pipelines
- ☐ c. Increasing manual configuration
- ☐ d. Removing containerization

**Question 18**

Incorrect

Mark 0.00 out of 1.00

Which of the following is a potential drawback of using Test-Driven Development (TDD)?

- ☐ a. Code may become too tightly coupled
- ☐ b. Increased likelihood of missing edge cases
- ☐ c. Slower feedback loop in detecting errors
- ☒ d. A large number of redundant tests ✗

**Question 19**

Correct

Mark 1.00 out of 1.00

Software estimation techniques are only useful during initial development and have no role in maintenance projects.

- ☒ a. False ✓
- ☐ b. True

**Question 20**

Correct

Mark 1.00 out of 1.00

In the context of software security, which term refers to verifying the identity of users or systems?

- ☒ a. Authentication ✓
- ☐ b. Authorization
- ☐ c. Accounting
- ☐ d. Auditing