

Chapter 1

True False Questions:

1. Software is a product and can be manufactured using the same technologies used for other engineering artifacts.
The Answer is: **False.**
 2. WebApps are a mixture of print publishing and software development, making their development outside the realm of software engineering practice.
The Answer is: **False.**
 3. There are no real differences between creating WebApps and Mobile-Apps.
The Answer is: **False.**
 4. In its simplest form an external computing device may access cloud data services using a web browser.
The Answer is: **True.**
 5. Product line software development depends the reuse of existing software components to provide software engineering leverage.
The Answer is: **True.**
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Multiple Choice Questions:

1. Which question no longer concerns the modern software engineer?
A. Why does computer hardware cost so much?
B. Why does software take a long time to finish?
C. Why does it cost so much to develop a piece of software?
D. Why can't software errors be removed from products prior to delivery?
The Answer is: A
2. Software deteriorates rather than wears out because
A. Software suffers from exposure to hostile environments.
B. Defects are more likely to arise after software has been used often.
C. Multiple change requests introduce errors in component interactions.
D. Software spare parts become harder to order.
The Answer is: C

Chapter 2

True False Questions:

1. Software engineering umbrella activities are only applied during the initial phases of software development projects.
The Answer is: **False.**
 2. Planning ahead for software reuse reduces the cost and increases the value of the systems into which they are incorporated.
The Answer is: **True.**
 3. The essence of software engineering practice might be described as understand the problem, plan a solution, carry out the plan, and examine the result for accuracy. **True.**
 4. In agile process models the only deliverable work product is the working program. **False.**
 5. A most software development projects are initiated to try to meet some business need.
The Answer is: **True.**
 6. In general software only succeeds if its behavior is consistent with the objectives of its designers.
The Answer is: **False.**
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Multiple Choice Questions:

1. Which of the items listed below is not one of the software engineering layers?
A. Process.
B. Manufacturing.
C. Methods.
D. Tools.
The Answer is: B
2. Which of these are the 5 generic software engineering framework activities?
A. communication, planning, modeling, construction, deployment.
B. communication, risk management, measurement, production, reviewing.
C. analysis, designing, programming, debugging, maintenance.
D. analysis, planning, designing, programming, testing.
The Answer is: A

Chapter 3

True False Questions:

1. The communication activity is best handled for small projects using six distinct actions (inception, elicitation, elaboration, negotiation, specification, validation).

The Answer is: **False.**

2. A good software development team always uses the same task set for every project to insure high quality work products.

The Answer is: **False.**

3. Software processes can be constructed out of pre-existing software patterns to best meet the needs of a software project.

The Answer is: **True.**

Multiple Choice Questions:

1. Which of the following are recognized process flow types?

- A. Concurrent process flow.
- B. Iterative process flow.
- C. Linear process flow.
- D. Spiral process flow.

E. both b and c

The Answer is: E

2. Which of these are standards for assessing software processes?

- A. SEI.
- B. SPICE.
- C. ISO 9000.
- D. ISO 9001.

E. both b and d

The Answer is: E

Chapter 4

True False Questions:

1. Process technology tools allow software organizations to compress schedules by skipping unimportant activities.
The Answer is: **False.**
 2. It is generally accepted that one cannot have weak software processes and create high quality end products.
The Answer is: **True.**
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Multiple Choice Questions:

1. The waterfall model of software development is
A. A reasonable approach when requirements are well defined.
B. A good approach when a working program is required quickly.
C. The best approach to use for projects with large development teams.
D. An old fashioned model that is rarely used any more.

The Answer is: A

2. The incremental model of software development is
A. A reasonable approach when requirements are well defined.
B. A good approach when a working core product is required quickly.
C. The best approach to use for projects with large development teams.
D. A revolutionary model that is not used for commercial products.

The Answer is: B

3. Evolutionary software process models
A. Are iterative in nature.
B. Can easily accommodate product requirements changes.
C. Do not generally produce throwaway systems.
D. All of the above.

The Answer is: D

4. The prototyping model of software development is
A. A reasonable approach when requirements are well defined.
B. A useful approach when a customer cannot define requirements clearly.
C. The best approach to use for projects with large development teams.
D. A risky model that rarely produces a meaningful product.

The Answer is: B

5. The spiral model of software development
- A. Ends with the delivery of the software product.
 - B. Is more chaotic than the incremental model.
 - C. Includes project risks evaluation during each iteration.
 - D. All of the above.

The Answer is: C

6. The concurrent development model is
- A. Another name for concurrent engineering.
 - B. Defines events that trigger engineering activity state transitions.
 - C. Only used for development of parallel or distributed systems.
 - D. Used whenever a large number of change requests are anticipated.
 - E. Both a and b

The Answer is: E

7. The component-based development model is
- A. Only appropriate for computer hardware design.
 - B. Not able to support the development of reusable components.
 - C. Dependent on object technologies for support.
 - D. Not cost effective by known quantifiable software metrics.

The Answer is: C

8. The formal methods model of software development makes use of mathematical methods to
- A. Define the specification for computer-based systems.
 - B. Develop defect free computer-based systems.
 - C. Verify the correctness of computer-based systems.
 - D. All of the above.

The Answer is: D

9. Which of these is not one of the phase names defined by the Unified Process model for software development?
- A. Inception phase.
 - B. Elaboration phase.
 - C. Construction phase.
 - D. Validation phase.

The Answer is: D

10. Which of these is not a characteristic of Personal Software Process?
- A. Emphasizes personal measurement of work product.
 - B. Practitioner requires careful supervision by the project manager.
 - C. Individual practitioner is responsible for estimating and scheduling.

D. Practitioner is empowered to control quality of software work products.

The Answer is: B

11. Which of these are objectives of Team Software Process?

A. Accelerate software process improvement.

B. Allow better time management by highly trained professionals.

C. Build self-directed software teams.

D. Show managers how to reduce costs and sustain quality.

E. Both b and c

The Answer is: E

True False Questions:

Agility is nothing more than the ability of a project team to respond rapidly to change.

The Answer is: **False.**

In agile software processes the highest priorities is to satisfy the customer through early and continuous delivery of valuable software.

The Answer is: **True.**

In agile development it is more important to build software that meets the customers' needs today than worry about features that might be needed in the future.

The Answer is: **True.**

All agile process models conform to a greater or lesser degree to the principles stated in the "Manifesto for Agile Software Development".

The Answer is: **True.**

The Dynamic Systems Development Method (DSDM) suggests a philosophy that is based on the Pareto principle (80% of the application can be delivered in 20% of the time required to build the complete application).

The Answer is: **True.**

Agile Unified Process uses the classic UP phased activities (inception, elaboration, construction, transition) to help the team visualize the overall process flow.

The Answer is: **True.**

Multiple Choice Questions:

1. Which of the following is not necessary to apply agility to a software process?

- A. Eliminate the use of project planning and testing.**
- B. Only essential work products are produced.
- C. Process allows team to streamline tasks.
- D. Uses incremental product delivery strategy.

The Answer is: A

2. How do you create agile processes to manage unpredictability?

- A. Requirements gathering must be conducted very carefully.
- B. Risk analysis must be conducted before planning takes place.

- C. Software increments must be delivered in short time periods.
- D. Software processes must adapt to changes incrementally.
- E. Both c and d

The Answer is: E

3. What are the four framework activities found in the Extreme Programming (XP) process model?
- A. analysis, design, coding, testing.
 - B. planning, analysis, design, coding.
 - C. planning, analysis, coding, testing.
 - D. planning, design, coding, testing.

The Answer is: D

4. Which is not one of the key questions that is answered by each team member at each daily Scrum meeting?
- A. What did you do since the last meeting?
 - B. What obstacles are you encountering?
 - C. What is the cause of the problem you are encountering?
 - D. What do you plan to accomplish by the next team meeting?

The Answer is: C

5. Agile Modeling (AM) provides guidance to practitioner during which of these software tasks?
- A. Analysis.
 - B. Design.
 - C. Coding.
 - D. Testing.
 - E. Both a and b

The Answer is: E

True False Questions:

1. Human aspects of software engineering are not relevant in today's agile process models.
The Answer is: **False.**
 2. Group communication and collaboration are as important as the technical skills of an individual team member to the success of a team.
The Answer is: **True.**
 3. Teams with diversity in the individual team member skill sets tend to be more effective than teams without this diversity.
The Answer is: **True.**
 4. Software engineering team structure is independent of problem complexity and size of the expected software products.
The Answer is: **False.**
 5. Agile teams are allowed to self-organize and make their own technical decisions.
The Answer is: **True.**
 6. In XP a metaphor is used as a device to facilitate communications among customers, team members, and managers?
The Answer is: **True.**
 7. Using an established social media platform negates the need to be concerned about privacy or security.
The Answer is: **False.**
 8. Use of cloud services can speed up information sharing among software team members?
The Answer is: **True.**
 9. In collaborative development environments, metrics are used to reward and punish team members.
The Answer is: **False.**
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Multiple Choice Questions:

1. Which of the following is not an important trait of an effective software engineer?
 - A. Attentive to detail.
 - B. Brutally honest.
 - C. Follows process rule dogmatically.
 - D. Resilient under pressure.

The Answer is: C

2. Which of the following can contribute to team toxicity?
 - A. Frenzied work atmosphere.
 - B. Inadequate budget.
 - C. Poorly coordinated software process.
 - D. Unclear definition of team roles.
 - E. a, b, d

The Answer is: E

3. Which of these factors complicate decision-making by global software teams?
 - A. Complexity of problem.
 - B. Different views of the problem.
 - C. Law of unintended consequences.
 - D. Risk associated with decision.
 - E. All of the above.

The Answer is: E

True False Questions:

1. Software engineering principles have about a three year half-life.
Answer is: **False.**
2. Every communication activity should have a facilitator to make sure that the customer is not allowed to dominate the proceedings.
Answer is: **False.**
3. The agile view of iterative customer communication and collaboration is applicable to all software engineering practice.
Answer is: **True.**
4. Project plans should not be changed once they are adopted by a team.
Answer is: **False.**
5. The design model should be traceable to the requirements model?
Answer is: **True.**
6. Teams using agile software practices do not generally create models.
Answer is: **False.**
7. A successful test is one that discovers at least one as-yet undiscovered error.
Answer is: **True.**
8. Larger programming teams are always more productive than smaller teams.
Answer is: **False.**

Multiple Choice Questions:

1. Which of the following is not one of core principles of software engineering practice?
 - A. All design should be as simple as possible, but no simpler.
 - B. A software system exists only to provide value to its users.
 - C. Pareto principle (20% of any product requires 80% of the effort).
 - D. Remember that you produce others will consume.The answer is: C

2. One reason to involve everyone on the software team in the planning activity is to
- A. adjust the granularity of the plan.
 - B. control feature creep.
 - C. get all team members to "sign up" to the plan.
 - D. understand the problem scope.

The answer is: C

3. Requirements models depict software in which three domains?
- A. architecture, interface, component.
 - B. cost, risk, schedule.
 - C. information, function, behavior.
 - D. None of the above.

The answer is: D

4. Which of the following is not one of the principles of good coding?
- A. Create unit tests before you begin coding.
 - B. Create unit tests before you begin coding.
 - C. Refactor the code after you complete the first coding pass.
 - D. Write self-documenting code, not program documentation.

The answer is: C

5. Which of the following are valid reasons for collecting customer feedback concerning delivered software?
- A. Allows developers to make changes to the delivered increment.
 - B. Delivery schedule can be revised to reflect changes.
 - C. Developers can identify changes to incorporate into next increment.
 - D. All of the above.

The answer is: D

True False Questions:

1. Requirements engineering is a generic process that does not vary from one software project to another.
Answer is: **True.**
2. A stakeholder is anyone who will purchase the completed software system under development.
Answer is: **False.**
3. It is relatively common for different customers to propose conflicting requirements, each arguing that his or her version is the right one.
Answer is: **True.**
4. Non-functional requirements can be safely ignored in modern software development projects.
Answer is: **False.**
5. User stories are complete descriptions the user needs and include the non-functional requirements for a software increment.
Answer is: **True.**
6. Developers and customers create use-cases to help the software team understand how different classes of end-users will use functions.
Answer is: **True.**
7. Use-case actors are always people, never system devices.
Answer is: **False.**
8. Analysis patterns facilitate the transformation of the analysis model into a design model by suggesting reliable solutions to common problems.
Answer is: **True.**
9. In agile process models requirements engineering and design activities are interleaved.
Answer is: **True.**
10. In win-win negotiation, the customer's needs are met even though the developer's need may not be.
Answer is: **False.**

11. In requirements validation the requirements model is reviewed to ensure its technical feasibility.
Answer is: **False.**
 12. The most common reason for software project failure is lack of functionality.
Answer is: **False.**
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Multiple Choice Questions:

1. During project inception the intent of the of the tasks are to determine
 - A. basic problem understanding
 - B. nature of the solution needed
 - C. people who want a solution
 - D. none of the above
 - E. a, b, c**The answer is: E
2. Three things that make requirements elicitation difficult are problems of
 - A. Budgeting
 - B. Scope
 - C. Understanding
 - D. Volatility
 - E. b, c, d**The answer is: E
3. Which of the following is not one of the context-free questions that would be used during project inception?
 - A. What will be the economic benefit from a good solution?
 - B. Who is behind the request for work?
 - C. Who will pay for the work?**
 - D. Who will use the solution?The answer is: C
4. In collaborative requirements gathering the facilitator
 - A. arranges the meeting place
 - B. can not be a customer
 - C. controls the meeting**
 - D. must be an outsiderThe answer is: C
5. Which of the following is not one of the requirement classifications used in Quality Function Deployment (QFD)?
 - A. exciting.
 - B. expected.

C. mandatory.

D. normal.

The answer is: C

6. The work products produced during requirement elicitation will vary depending on the
- A. size of the budget.
 - B. size of the product being built.
 - C. software process being used.
 - D. stakeholders needs.

E. both a and b

The answer is: E

7. The result of the requirements engineering task is an analysis model that defines which of the following problem domain(s)?
- A. information.
 - B. functional.
 - C. behavioral.

D. all of the above.

The answer is: D