Answers

Question	Answers	Score
24. A system with a _____ has more value.	(b) good code (c) small list of users (d) good document **(a) long lifetime**	0.0 / 1.0
25. When you think about something, you are more_____.	(b) efficient (c) profitable (d) likely to do with less errors **(a) likely to do it right**	1.0 / 1.0
23. In a well engineered software, the payoff is, the software is _____ and less error-prone.	(a) less expensive (c) efficient (d) standard **(b) more maintainable**	0.0 / 1.0
22. Software engineering process framework activities are complemented by a number of _____	(b) meetings (c) designs (d) meetings with developers **(a) umbrella activities**	1.0 / 1.0

21. A software engineer create a _____ to better understand software requirements.	(a) flowchart (b) UML diagram (c) use cases **(d) model**	0.0 / 1.0
8. Recognition of software realities is the last step toward formulation of practical solutions for software engineering.	True **False**	1.0 / 1.0
9. Framework for software engineering defines six framework activities.	True **False**	1.0 / 1.0
10. A general statement of objectives is sufficient to begin writing programs	True **False**	1.0 / 1.0
11. Generic framework of activities does not involve	(c) construction (b) planning (a) Communication **(d) testing**	1.0 / 1.0
12. Software is not	(b) a data structure (c) using of the programs (a) an instruction **(d) a language**	1.0 / 1.0

13. This is not a part of System Software	(d) process management (c) scheduling (a) resource sharing **(b) data processing**	1.0 / 1.0
14. Product-line software is not	(c) dashboard displays (b) spread sheet (a) wordprocessing **(d) computer graphics**	1.0 / 1.0
15. A legacy software is	(d) cheap to maintain (c) replaceable (b) up to date **(a) poor quality**	0.0 / 1.0
16. When large number of users access the WebApp at one time, is called as	(d) Load (b) Network intensiveness (c) Availability **(a) Concurrency**	1.0 / 1.0
17. Software in all of its forms and across all of its application domains should be	(d) created (c) designed (a) developed	1.0 / 1.0

	(b) engineered	
18. Software engineering is a _____ technology.	(b) modular (c) component (d) a language **(a) layered**	1.0 / 1.0
19. A _____ is a collection of activities, actions, and tasks that are performed when a product is developed.	(a) design (c) task list (d) sequence **(b) process**	1.0 / 1.0
20. Before any technical work can commence, it is critically important to _____ with the customer.	(a) plan (b) discuss (d) discuss cost **(c) collaborate**	1.0 / 1.0
The audience for any software development product is potentially small	True **False**	1.0 / 1.0
6. Agile process models follow a set of principles that lead to a more formal approach to software process	True **False**	1.0 / 1.0
5. Each project iteration produces a software increment that provides stakeholders with a complete software features and functionality	True	1.0 / 1.0

	False	
4. Legacy software systems are cheap to maintain and easy to evolve	True **False**	1.0 / 1.0
3. Software is susceptible to the environmental maladies that cause hardware to wear out.(	True **False**	1.0 / 1.0
2. Software projects can be managed as if they were manufacturing projects	True **False**	1.0 / 1.0
1. Software delivers the most important product of our time, the program.	True **False**	1.0 / 1.0

Answers

Question	Answers	Score
4. Requirements Gathering is a task pattern	**True** False	1.0 / 1.0
3. This implies that a software engineering action can be adapted to the specific needs of the software project and the characteristics of the project team.	**True** False	1.0 / 1.0
1. The work products are the hardware, documents, and data that are produced as a consequence of the activities and tasks defined by the process.	True **False**	1.0 / 1.0
2. An evolutionary process flow repeats one or more of the activities in a sequential manner.	True **False**	1.0 / 1.0
5. Communication is mandatory at the beginning of every software project.	**True** False	1.0 / 1.0
6. The component-based development model constructs applications from primitive software components	True **False**	1.0 / 1.0
7. Unified Process (UP) is not suitable for object-oriented projects	True **False**	1.0 / 1.0

8. The best software process is one that is close to the computer which will be doing the work	True **False**	1.0 / 1.0
9. Personal Software Process has been widely adopted throughout the industry	True **False**	1.0 / 1.0
10. PSP and TSP are a simple approach to software engineering	True **False**	1.0 / 1.0
11. For a small software project requested by a person via phone, the only necessary action is phone conversation, and the work tasks (the task set) that this action does not encompasses is:	Make contact with stakeholder via telephone. Discuss requirements and take notes. Organize notes into a brief written statement of requirements. **A visit to the person's place.**	1.0 / 1.0
SCAMPI—provides a five-step process assessment model that incorporates five phases: initiating, diagnosing, _____, acting, and learning.	**establishing** modelling assessment analyzing	0.0 / 1.0
A variation in the representation of the waterfall model is called the _____	) classic life cycle b) sequence d) priscriptive **c) V-model.**	1.0 / 1.0

14. As a software engineer, you often make implementation _____ in order to get a prototype working quickly.	b) easy c) choices. a) details **d) compromises**	1.0 / 1.0
15. The spiral development model is a _____ generator that is used to guide multi-stakeholder concurrent engineering of software intensive systems.	d) process **a) risk-driven process model** b) circle c) spiral diagram	1.0 / 1.0
16. The spiral model is a realistic approach to the development of _____ and software.	b) small projects c) tools. d) hardware c) tools. d) hardware **a) large-scale systems**	1.0 / 1.0
17. Concurrent modeling is applicable to _____ of software development and provides an accurate picture of the current state of a project.	**b) all types** d) priscriptive type c) concurrent type a) iterative type	1.0 / 1.0
18. Evolutionary software processes do not establish the _____ of the evolution.	d) cost c) nature b) type	1.0 / 1.0

	a) maximum speed	
19. The component-based development model incorporates many of the characteristics of the _____ model.	d) priscriptive a) waterfall b) agile **c) spiral**	1.0 / 1.0
20. Formal methods enable you to specify, develop, and verify a computer-based system by applying a rigorous, _____ notation.	d) software c) modelling b) formal **a) mathematical**	1.0 / 1.0
21. Aspectual requirements define _____ concerns that have an impact across the software architecture.	c) design d) design **a) crosscutting** b) functional	1.0 / 1.0
22. The transition phase of the UP encompasses the latter stages of the generic construction activity and the first part of the _____ activity.	d) review c) documentation a) testing **b) deployment**	1.0 / 1.0
23. The Personal Software Process (PSP) emphasizes personal_____ of both the work product that is produced and the resultant quality of the work product.	b) development c) QA testing	1.0 / 1.0

	d) measurement a) supervision	
24. The goal of TSP is to build a _____ project team that organizes itself to produce high-quality software.	a) well trained b) skilled d) dedicated **c) selfdirected**	0.0 / 1.0
25. _____ tools have been developed to help software organizations analyze their current process,organize work tasks, control and monitor progress, and manage technical quality.	d) debugging b) test c) QA tools **a) process technology**	

Answers

Question	Answers	Score
1. Agility is nothing more than the ability of a project team to respond rapidly to change.	True **False**	1.0 / 1.0
2. Which of the following is not necessary to apply agility to a software process?	d Uses incremental product delivery strategy c.Process allows team to streamline tasks b. Only essential work products are produced a. **Eliminate the use of project planning and testing.**	1.0 / 1.0
3. How do you create agile processes to manage unpredictability?	**c. Software increments must be delivered in short time periods** b. Risk analysis must be conducted before planning takes place a. Requirements gathering must be conducted very carefully d. Software processes must not adapt to changes incrementally	1.0 / 1.0
4. In agile software processes the highest priorities is to satisfy the customer through early and continuous delivery of valuable software.	**True** False	1.0 / 1.0
Which of the following traits need to exist among the members of an agile software team?	a. Competence	1.0 / 1.0

	b. Decision-making ability c. Mutual trust and respect d. **All of the above**	
6. 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.	**True** False	1.0 / 1.0
7. 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**	1.0 / 1.0
8. All agile process models conform to a greater or lesser degree to the principles stated in the "Manifesto for Agile Software Development".	**True** False	1.0 / 1.0
9. What are the three framework activities for the Adaptive Software Development (ASD) process model?	a. analysis, design, coding b. feasibility study, functional model iteration, implementation c. requirements gathering, adaptive cycle planning, iterative development d. **speculation, collaboration, learning**	1.0 / 1.0
10. 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? d. What do you plan to accomplish be the next team	1.0 / 1.0

	meeting? **c. What is the cause of the problems you are encountering?**	
11. 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).	**True** False	1.0 / 1.0
12. In Feature Driven Development (FDD) a client-valued feature is a client-valued function that can be delivered in two weeks or less.	True **False**	1.0 / 1.0
13. Agile Modeling (AM) provides guidance to practitioner during which of these software tasks?	Modelling Coding Testing **Design**	0.0 / 1.0
14. Agile Unified Process uses the classic UP phased activities (inception, elaboration, construction, transition) to help the team visualize the overall process flow.	**True** False	1.0 / 1.0
15. One of the most compelling characteristics of the agile approach is its ability to reduce the communication gap throughout the software process.	True **False**	1.0 / 1.0
16. The conventional wisdom in software development (supported by decades of experience) is that the cost of change increases linearly as a project progresses.	True **False**	1.0 / 1.0
17. How do we create a process that can manage unpredictability?	b.using predictive models	1.0 / 1.0

	c.using past experience d. using continuous feedback a. **using adaptability**	
18. _____in Software engineering is about assessing, analyzing, and using information that is useful to the software team.	a. Estimation b. Team work d.Communication **c.Collaboration**	1.0 / 1.0
19. The planning activity (also called the planning game) begins with _____.	a.specification b.modelling c. communication **d. listening**	1.0 / 1.0
In XP _____ stories will be implemented immediately (within a few weeks)	b. highest risk c. highest value d. more time consuming a. **all**	1.0 / 1.0
21. If a difficult design problem is encountered as part of the design of a story, XP recommends the immediate creation of a	a. design model **b. spike solution** c. analysis model d. multiple solutions	1.0 / 1.0

22. Refactoring is the process of changing a software system in such a way that it does alter the external behavior of the code yet improves the internal structure.	True **False**	0.0 / 1.0
23. IXP makes smaller modifications to other XP practices and redefines certain roles and responsibilities to make them more amenable to _____ projects for _____ organizations.	a. small, small b. significant, small d. small, large **c. significant, large**	1.0 / 1.0
24. Collaboration emphasizes _____, because _____ creativity plays an important role in collaborative thinking	a. team work, individual b. team work, team's c. groups, small group's d. **individualism , individual**	0.0 / 1.0
25. Scrum emphasizes the use of a set of software process patterns that have proven effective for projects with _____ , _____ requirements, and business criticality.	a. flexible timelines, rigid c. large budget, changing d. small budget , flexible b. **tight timelines, changing**	1.0 / 1.0

Answers

Question	Answers	Score
1. Software engineering principles have about a three year half-life.	True **False**	1.0 / 1.0
2. 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. d. Remember that you produce others will consume **c. Pareto principle (20% of any product requires 80% of the effort)**	1.0 / 1.0
3. Every communication activity should have a facilitator to make sure that the customer is not allowed to dominate the proceedings.	True **False**	1.0 / 1.0
4. The agile view of iterative customer communication and collaboration is applicable to all software engineering practice.	**True** False	1.0 / 1.0
6. Project plans should not be changed once they are adopted by a team.	True **False**	1.0 / 1.0
7. Requirements models depict software in which three domains?	a. architecture, interface, component	1.0 / 1.0

	b. cost, risk, schedule d. None of the above c. **information, function, behavior**	
8. The design model should be traceable to the requirements model?	**True** False	1.0 / 1.0
9. Teams using agile software practices do not generally create models.	True **False**	1.0 / 1.0
10. Which of the following is not one of the principles of good coding?	a. Create unit tests before you begin coding b. Create a visual layout that aids understanding c. Refractor the code after you complete the first coding pass **d. Write self-documenting code, not program documentation**	0.0 / 1.0
11. A successful test I ones that discovers at least one as-yet undiscovered error.	**True** False	1.0 / 1.0
12. 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	1.0 / 1.0

	d. **All of the above**	
5. 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 d. understand the problem scope **c. get all team members to "sign up" to the plan**	1.0 / 1.0
13. Software engineering process and practice are important, but the bottom line is_____	agile methodology selection of tools good QA **people**	1.0 / 1.0
14. Lots of things can go wrong as software is being developed. It's essential that you establish a non contingency plans	True **False**	1.0 / 1.0
15. Effective _____ is among the most challenging activities that you will confront when you gather specifications	a. collaboration c. planning d. meetings **b. communication**	1.0 / 1.0
16. The intent of _____ is to provide an indication of effort, cost, and task duration, based on the team's current understanding of the work to be done.	forecast documetation planning **estimation**	1.0 / 1.0

The Scope provides the software team with a _____	goal plan **destination** cost	0.0 / 1.0
18. The iterative, incremental process models dictate re planning after the delivery of each software increment based on feedback received from users.	**True** False	1.0 / 1.0
19. A _____ plan provides significant work task detail that is planned over relatively short time increments	a) good scheduling b) low granularity d) all of the above **high-granularity**	1.0 / 1.0
20. A Communication principles focus on the need to _____ and improve bandwidth as the conversation between developer and customer progresses.	increase clarity smooth discussion d) continuous **b) reduce noise**	1.0 / 1.0
21. At the level of practice, core principles establish a philosophical foundation that guides a software team as it navigates through the software process	True **False**	1.0 / 1.0
22. At the process level, core principles establish a philosophical foundation that guides a software team as it navigates through the software process..	True **False**	0.0 / 1.0

23. Modeling principles serve as a foundation for the methods and notation that are used to create representations of the software.	**True** False	1.0 / 1.0
24. Although there are many testing principles, only one is dominant: testing is a process of executing a program with the intent of _____	fixing the bug verifying the specifications d) feedback to Developer **b) finding an error**	1.0 / 1.0
25. Key principles for delivery consider managing customer expectations and providing the developer with appropriate support information for the software	True **False**	0.0 / 1.0

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?

2

Today the increased power of the personal computer has brought about an abandonment of the practice of team development of software.

- A) True
- B) False

3

Software is a product and can be manufactured using the same technologies used for other engineering artifacts.

- A) True
- B) False

4

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

5

Most software continues to be custom built because

- A) Component reuse is common in the software world.
- B) Reusable components are too expensive to use.
- C) Software is easier to build without using someone else's components.
- D) Off-the-shelf software components are unavailable in many application domains.

6

The nature of software applications can be characterized by their information

- A) complexity

B content)

C determinacy)

D both b and c)

7

Modern software applications are so complex that it is hard to develop mutually exclusive category names.

A True)

B False)

8

The so called "new economy" that gripped commerce and finance during the 1990s died and no longer influences decisions made by businesses and software engineers.

A True)

B False)

9

The functionality of most computer systems does not need to be enhanced the lifetime of the system.

A True)

B False)

10

Change cannot be easily accommodated in most software systems, unless the system was designed with change in mind.

A True)

B False)

11

Most software development projects are initiated to try to meet some business need.

A True)

B False)

12

In general software only succeeds if its behavior is consistent with the objectives of its designers.

A True)

B False)

4 CORRECT

WebApps are a mixture of print publishing and software development, making their development outside the realm of software engineering practice.

A) True

✓ B) False

Feedback: (Section 1.2)

5 CORRECT

There are no real differences between creating WebApps and MobileApps.

A) True

✓ B) False

Feedback: (Section 1.2)

6 CORRECT

In its simplest form an external computing device may access cloud data services using a web browser.

✓ A) True

B) False

Feedback: (Section 1.2)

7 CORRECT

Product line software development depends the reuse of existing software components to provide software engineering leverage.

✓ A) True

B) False

the correct answer for each question is indicated by a ✓.

1 CORRECT

Which of the items listed below is not one of the software engineering layers?

A) Process

✓ B) Manufacturing

C) Methods

D) Tools

Feedback: (Section 2.1)

2 CORRECT

Software engineering umbrella activities are only applied during the initial phases of software development projects.

A) True

✓ B) False

Feedback: (Section 2.2)

3 CORRECT

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

Feedback: (Section 2.2)

4 CORRECT

Planning ahead for software reuse reduces the cost and increases the value of the systems into which they are incorporated.

✓ **A)** True

B) False

Feedback: (Section 2.3)

5 CORRECT

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.

✓ **A)** True

B) False

Feedback: (Section 2.3)

6 CORRECT

In agile process models the only deliverable work product is the working program.

A) True

✓ **B)** False

Feedback: (Section 2.4)

7 CORRECT

A most software development projects are initiated to try to meet some business need.

✓ **A)** True

B) False

Feedback: (Section 1.7)

---

1. What factor has precipitated more sophisticated and complex computer-based systems?

- a. Vast increases in computer memory and storage capacity.
- b. Greater variety of exotic input/output options.
- c. Profound changes in computer architectures.
- d. All of the above.

---

8. Modern software applications are so complex that it is hard to develop mutually exclusive category names.

- a. True
- b. False

---

9. The current software crisis was caused by the Y2K problem whose seeds were first sown by careless programmers in the early 1970's.

- a. True
- b. False

---

10. Software developers succeed more often than they fail, but software failures receive more press coverage.

- a. True
- b. False

---

11. Adding more people to a project that is already behind schedule is a good way to catch up.

- a. True
- b. False

---

12. Modern CASE tools are more important than the newest hardware for achieving good software quality and productivity.

- a. True
- b. False

---

14. A general statement of objectives is all that is needed to begin developing a piece of software.

- a. True
- b. False

---

15. The formal technical review is an inadequate substitute for testing regardless of nature of the software defect.

- a. True
- b. False

16. Documentation is no longer a necessary part of the software development process because no one reads it.

- a. True
- b. False

1 CORRECT

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

Feedback: (Section 3.1)

2 CORRECT

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

- A) True
- ✓ B) False

Feedback: (Section 3.2)

3 CORRECT

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

- A) True
- ✓ B) False

Feedback: (Section 3.3)

4 CORRECT

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

- ✓ A) True
- B) False

Feedback: (Section 3.4)

5 CORRECT

Which of these are standards for assessing software processes?

- A) SEI
- B) SPICE
- C) ISO 9000
- D) ISO 9001
- ✓ E) both b and d

Feedback: (Section 3.5)

1 CORRECT

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.

Feedback: (Section 4.1.1)

2 CORRECT

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.

Feedback: (Section 4.1.2)

3 CORRECT

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.

Feedback: (Section 4.1.3)

4 CORRECT

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.

Feedback: (Section 4.1.3)

5 CORRECT

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.

Feedback: (Section 4.1.3)

6 CORRECT

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

Feedback: (Section 4.1.4)

7 CORRECT

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.

Feedback: (Section 4.2.1)

8 CORRECT

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.

Feedback: (Section 4.2.2)

9 CORRECT

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

Feedback: (Section 4.3.2)

10 CORRECT

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.

Feedback: (Section 4.4.1)

11 CORRECT

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

Feedback: (Section 4.4.2)

12 CORRECT

Process technology tools allow software organizations to compress schedules by skipping unimportant activities.

A) True

✓ B) False

Feedback: (Section 4.5)

13 CORRECT

It is generally accepted that one cannot have weak software processes and create high quality end products.

✓ A) True

B) False

Feedback: (Section 4.6)

---

4 CORRECT

Process models are described as agile because they

A) eliminate the need for cumbersome documentation

✓ B) emphasize maneuverability and adaptability

C) do not waste development time on planning activities

D) make extensive use of prototype creation

Feedback:

---

5 CORRECT

Which of these terms are level names in the Capability Maturity Model?

A) Performed

B) Repeated

C) Reused

D) Optimized

✓ E) both a and d

Feedback:

---

1 CORRECT

The linear sequential 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 cannot be used in a modern context.

Feedback:

---

2 CORRECT

The linear sequential model of software development is also known as the

A) Classical life cycle model

B) Fountain model

C) Spiral model

D) Waterfall model

✓ E) both a and d

Feedback:

---

4 CORRECT

The rapid application development model is

A) Another name for component-based development.

B) A useful approach when a customer cannot define requirements clearly.

✓ C) A high speed adaptation of the linear sequential model.

D) All of the above.

Feedback:

---

7 CORRECT

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

Feedback:

---

8 CORRECT

The concurrent development model is

A) Another name for the rapid application development model.

✓ B) Often used for the development of client/server applications.

C) Only used for development of parallel or distributed systems.

D) Used whenever a large number of change requests are anticipated.

Feedback:

---

12 CORRECT

In the Unified Process model requirements are determined iteratively and may span more than one phase of the process.

✓ A) True

B) False

Feedback:

---

2. What are the three generic phases of software engineering?

a. definition, development, support

b. what, how, where

c. programming, debugging, maintenance

d. analysis, design, testing

---

3. Which of these terms is a level name in the Capability Maturity Model?

a. Ad hoc

b. Repeatable

c. Reusable

d. Organized

4. Which of these items should be used to select a software process framework?

- a. People
- b. Product
- c. Project
- d. All of the above

---

5. In which software development problem solving stage are the results delivered?

- a. Status quo
- b. Problem definition
- c. Technical development
- d. Solution integration

---

6. Software development activities are easy to compartmentalize into four non-overlapping phases?

- a. True
- b. False

---

8. The linear sequential model of software development is also known as the

- a. Classical life cycle model
- b. Fountain model
- c. Spiral model
- d. Chaos model

---

10. The rapid application development model is

- a. Another name for component-based development.
- b. A useful approach when a customer cannot define

requirements clearly.

- c. A high speed adaptation of the linear sequential model.
- d. All of the above.

---

14. The WINWIN spiral model of software development is

- a. A used when requirements must be defined by customer negotiation.
- b. Useful when a customer is able to provide requirements completely.
- c. The best approach to use for projects with large development teams.
- d. Like the spiral model without the risk assessment step.

---

15. The concurrent development model is

- a. Another name for the rapid application development model.
- b. Often used for the development of client/server applications.
- c. Only used for development of parallel or distributed systems.
- d. Used whenever a large number of change requests are anticipated.

---

18. Fourth generation techniques

- a. Allow software to be developed without any testing.
- b. Eliminate the need for costly requirements gathering activities.
- c. Can reduce the time required to develop software.
- d. Are best used by non-programmers to build small systems.

1 INCORRECT

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

- **A)** True
- ✓ **B)** False

2 CORRECT

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

Feedback: (Section 5.1)

3 CORRECT

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

Feedback: (Section 5.2)

4 CORRECT

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

- ✓ **A)** True
- **B)** False

Feedback: (Section 5.3)

5 CORRECT

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.

- ✓ **A)** True
- **B)** False

Feedback: (Section 5.3.2)

6 INCORRECT

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

7 INCORRECT

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

✓ **A)** True

B) False

9 CORRECT

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).

✓ **A)** True

B) False

Feedback: (Section 5.5.2)

10 INCORRECT

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

11 CORRECT

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

✓ **A)** True

B) False

5 CORRECT

Which of the following traits need to exist among the members of an agile software team?

A) Competence

B) Decision-making ability

C) Mutual trust and respect

✓ **D)** All of the above

Section 3.4.1

7
CORRECT

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

Section 3.5

9
INCORRECT

What are the three framework activities for the Adaptive Software Development (ASD) process model?

- **A)** analysis, design, coding
- **B)** feasibility study, functional model iteration, implementation
- **C)** requirements gathering, adaptive cycle planning, iterative development
- ✓ **D)** speculation, collaboration, learning

Section 3.5.2

10
INCORRECT

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 problems you are encountering?
- **D)** What do you plan to accomplish be the next team meeting?

Section 3.5.3

11
CORRECT

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).

- ✓ **A)** True
- **B)** False

Section 3.5.5

12
INCORRECT

In Feature Driven Development (FDD) a client-valued feature is a client-valued function that can be delivered in two weeks or less.

- **A)** True
- ✓ **B)** False

Section 3.5.7

13
CORRECT

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

Section 3.5.8

14
CORRECT

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

- ✓ **A)** True
- **B)** False

1 CORRECT

Software engineering principles have about a three year half-life.

- **A)** True
- ✓ **B)** False

Feedback: (Section 7.1)

2 CORRECT

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

Feedback: (Section 7.2)

3 CORRECT

Every communication activity should have a facilitator to make sure that the customer is not allowed to dominate the proceedings.

- **A)** True
- ✓ **B)** False

Feedback: (Section 7.3.1)

4 CORRECT

The agile view of iterative customer communication and collaboration is applicable to all software engineering practice.

- ✓ **A)** True
- **B)** False

Feedback: (Section 7.3.1)

5 CORRECT

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

Feedback: (Section 7.3.2)

6 CORRECT

Project plans should not be changed once they are adopted by a team.

- **A)** True
- ✓ **B)** False

Feedback: (Section 7.3.2)

7 CORRECT

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

Feedback: (Section 7.3.3)

8

CORRECT

The design model should be traceable to the requirements model?

✓ A) True

B) False

Feedback: (Section 7.3.3)

9 CORRECT

Teams using agile software practices do not generally create models.

A) True

✓ B) False

Feedback: (Section 7.3.3)

10 CORRECT

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

Feedback: (Section 7.3.4)

11 CORRECT

A successful test I ones that discovers at least one as-yet undiscovered error.

✓ A) True

B) False

Feedback: (Section 7.3.4)

12 CORRECT

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

Feedback: (Section 7.3.5)

13 CORRECT

Larger programming teams are always more productive than smaller teams.

A) True

✓ B) False

Feedback: (Section 7.4)

---

5 CORRECT

Software engineers collaborate with customers to define which of the following?

A) Customer visible usage scenarios

B) Important software features

C) System inputs and outputs

✓ D) All of the above

7 INCORRECT

What role(s) do user stories play in agile planning?

A) Define useful software features and functions delivered to end-users
B) Determine a schedule used to deliver each software increment
C) Provide a substitute to performing detailed scheduling of activities
✓ D) Used to estimate the effort required build the current increment
E) both a and d

8 CORRECT

Which of the following activities is not one of the four things that need to be accomplished by the generic planning task set?

A) Develop overall project strategy
B) Identify the functionality to deliver in each software increment
✓ C) Create a detailed schedule for the complete software project
D) Devise a means of tracking progress on a regular basis

10 CORRECT

The customer can directly observe both the difference between the internal quality of a design and its external quality?

A) True
✓ B) False

12 INCORRECT

Many of the tasks from the generic task sets for analysis modeling and design can be conducted in parallel with one another.

✓ A) True
B) False

14 CORRECT

A successful test is one that discovers at least one as-yet undiscovered error.

✓ A) True
B) False

15 CORRECT

Which of the following are tasks in the generic task set for construction?

A) Build a software component
B) Create a user interface
C) Unit test the component
D) Assess the quality of the component
✓ E) both a and c

16 CORRECT

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

1 CORRECT

Requirements engineering is a generic process that does not vary from one software project to another.

✓ A) True

B) False

Feedback: (Section 8.1)

2 CORRECT

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

Feedback: (Section 8.1)

3 CORRECT

Three things that make requirements elicitation difficult are problems of

A) budgeting

B) scope

C) understanding

D) volatility

✓ E) b, c, d

Feedback: (Section 8.1)

4 CORRECT

A stakeholder is anyone who will purchase the completed software system under development.

A) True

✓ B) False

Feedback: (Section 8.2.1)

5 CORRECT

It is relatively common for different customers to propose conflicting requirements, each arguing that his or her version is the right one.

✓ A) True

B) False

Feedback: (Section 8.2.2)

6 CORRECT

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?

Feedback: (Section 8.2.4)

7 CORRECT

Non-functional requirements can be safely ignored in modern software development projects.

A) True

✓ B) False

Feedback: (Section 8.2.5)

8 CORRECT

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 outsider

Feedback: (Section 8.3.1)

9 CORRECT

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

Feedback: (Section 8.3.2)

10 CORRECT

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

Feedback: (Section 8.3.4)

11 INCORRECT

User stories are complete descriptions the user needs and include the non-functional requirements for a software increment.

✓ A) True

B) False

12 CORRECT

Developers and customers create use-cases to help the software team understand how different classes of end-users will use functions.

✓ A) True

B) False

Feedback: (Section 8.4)

13 CORRECT

Use-case actors are always people, never system devices.

A) True

✓ B) False

Feedback: (Section 8.4)

14 CORRECT

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

Feedback: (Section 8.5.1)

15 CORRECT

Analysis patterns facilitate the transformation of the analysis model into a design model by suggesting reliable solutions to common problems.

✓ A) True

B) False

Feedback: (Section 8.5.2)

16 CORRECT

In agile process models requirements engineering and design activities are interleaved.

✓ A) True

B) False

Feedback: (Section 8.5.3)

17 CORRECT

In win-win negotiation, the customer's needs are met even though the developer's need may not be.

A) True

✓ B) False

Feedback: (Section 8.6)

18 CORRECT

In requirements validation the requirements model is reviewed to ensure its technical feasibility.

A) True

✓ B) False

Feedback: (Section 8.8)

19 CORRECT

The most common reason for software project failure is lack of functionality.

A) True

✓ B) False

Feedback: (Section 8.9)

1 CORRECT

Which of these is not an element of a requirements model?

A) Behavioral elements

B) Class-based elements

✓ C) Data elements

D) Scenario-based elements

Feedback: (Section 9.1)

2 CORRECT

Which of the following is not an objective for building a requirements model?

A) define set of software requirements that can be validated

B) describe customer requirements

✓ C) develop an abbreviated solution for the problem

D) establish basis for software design

Feedback: (Section 9.1.1)

3 CORRECT

Object-oriented domain analysis is concerned with the identification and specification of reusable capabilities within an application domain.

✓ A) True

B) False

Feedback: (Section 9.1.3)

4 CORRECT

In structured analysis models focus on the structure of the classes defined for a system along with their interactions.

A) True

✓ B) False

Feedback: (Section 9.1.4)

5 CORRECT

Creation and refinement of use cases if an important part of scenario-based modeling.

✓ A) True

B) False

Feedback: (Section 9.2)

6 CORRECT

It is important to consider alternative actor interactions when creating a preliminary use case.

A) True

✓ B) False

Feedback: (Section 9.2.1)

7 CORRECT

Brainstorming is one technique that may be used to derive a complete set of use case exceptions.

✓ A) True

B) False

Feedback: (Section 9.2.2)

8 CORRECT

In many cases there is no need to create a graphical representation of a usage scenario.

✓ A) True

B) False

Feedback: (Section 9.2.3)

9 CORRECT

UML activity diagrams are useful in representing which analysis model elements?

A) Behavioral elements

B) Class-based elements

C) Flow-based elements

✓ D) Scenario-based elements

Feedback: (Section 9.3.1)

10 CORRECT

UML swimnlane diagrams allow you to represent the flow of activities by showing the actors having responsibility for creating each data element.

A) True

✓ B) False

Feedback: (Section 9.3.2)

---

1 CORRECT

Which of these is not an element of a requirements model?

A) Behavioral elements

B) Class-based elements

✓ C) Data elements

D) Scenario-based elements

Section 6.1.3

3 CORRECT

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Section 6.1.4

4 CORRECT

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A) True

✓ ○ **B)** False

Section 6.2

5 CORRECT

Creation and refinement of use cases if an important part of scenario-based modeling.

✓ ○ **A)** True

○ **B)** False

Section 6.2.1

6 CORRECT

It is important to consider alternative actor interactions when creating a preliminary use case.

○ **A)** True

✓ ○ **B)** False

---

10 CORRECT

One or more attributes of a data object must be defined as a key to allow the location of an instance of the data object.

✓ ○ **A)** True

○ **B)** False

Section 6.4.3

11 CORRECT

The entity relationship diagram

✓ ○ **A)** depicts relationships between data objects

○ **B)** depicts functions that transform the data flow

○ **C)** indicates how data are transformed by the system

○ **D)** indicates system reactions to external events

Section 6.5.1

12 CORRECT

Which of the following should be considered as candidate objects in a problem space?

○ **A)** events

○ **B)** people

○ **C)** structures

✓ ○ **D)** all of the above

Section 6.5.2

13 INCORRECT

Attributes are chosen for an object by examining the problem statement and identifying the entities that appear to be related.

- **A)** True
- ✓ **B)** False

Section 6.5.3

14 CORRECT

Which of the following is not one of the broad categories used to classify operations?

- **A)** computation
- **B)** data manipulation
- **C)** event monitors
- ✓ **D)** transformers

Section 6.5.4

15 CORRECT

Which of the following items does not appear on a CRC card?

- **A)** class collaborators
- **B)** class name
- ✓ **C)** class reliability
- **D)** class responsibilities

Section 6.5.4

16 CORRECT

Class responsibilities are defined by

- **A)** its attributes only
- **B)** its collaborators
- **C)** its operations only
- ✓ **D)** both its attributes and operations

Section 6.5.6

17 CORRECT

An analysis package involves the categorization of analysis model elements into useful groupings.

✓ **A)** True

B) False