

Assignment Questions

1. Question: Which software development model is characterized by a sequential process with distinct phases, where each phase must be completed before the next begins?

- A) Incremental development
- B) Integration and configuration
- C) Waterfall model
- D) Spiral model

Correct Answer: C

2. Question: What is a major advantage of incremental development over the waterfall model?

- A) Faster project completion times.
- B) Difficulty in gathering customer feedback.
- C) Early delivery and deployment of useful software.
- D) Increased project documentation requirements.

Correct Answer: C

3. Question: What is a software process, according to the provided text?

- A) A set of unrelated activities that do not lead to software production.
- B) A set of related activities that lead to the production of a software system.
- C) A universally applicable method for all types of software development.

D) A process that only includes software development activities.

Correct Answer: B

4. Question: What is the primary goal of unit testing in software development?

A) To integrate individual program units into a complete system.

B) To identify and fix defects in the integrated system.

C) To verify that each individual component functions correctly and meets its specified requirements.

D) To deliver the final software product to the customer for deployment.

Correct Answer: C

5. Question: What are web services and how do they benefit other systems?

Answer: Web services are independent software services accessed remotely over the internet. They allow other systems to use their functionality without needing to install or maintain the code themselves, like the Google Maps API or PayPal API.

6. Question: What is the primary benefit of incorporating feedback into the Waterfall model?

Answer: Feedback allows documents produced at previous stages to be modified to reflect required system changes. This ensures that the system evolves to meet changing needs and can address issues like expensive requirements.

7. Question: What are the three main approaches to creating a new system when an off-the-shelf application isn't available?

Answer: The three approaches are: (1) Component analysis, (2) Application system configuration, and (3) Component adaptation and integration. These approaches involve either using existing systems, modifying existing components, or creating new ones.

8. Question: What are the three main activities involved in the software lifecycle, as described in the text?

Answer: The three main activities are software specification, software development, and software validation. These activities are complex and involve subactivities like requirements validation and architectural design.

9. Question: Large, complex systems require a stable framework or architecture that defines the main components of the system and specifies how those components interact.

Answer: True

10. Question: Plan-driven software processes involve a structured, sequential approach where all software process activities are planned in advance before development begins.

Answer: True

11. Question: Specification, development, and validation activities are carried out as separate phases.

Answer: False

12. Question: Developers often modify and adapt existing code from previous projects or open-source libraries to meet new system requirements.

Answer: True