

Final Exam - Due April 17, 2020

Due No due date

Points 40

Questions 40

Time Limit None

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	41 minutes	39 out of 40

⚠ Correct answers are hidden.

Submitted Apr 15 at 9:26pm

Question 1

1 / 1 pts

An architecture can be sufficiently designed only using module structures.

☐ True

☒ False

Question 2

1 / 1 pts

Increasing coupling between software modules is a good way to ensure modifiability.

☐ True

☒ False

Question 3

1 / 1 pts

For a system to be testable, it must be possible to control each component's inputs and observe its outputs.

☒ True

☐ False

Question 4

1 / 1 pts

To increase usability, an architect can either support the user initiative or support the system initiative.

☒ True

☐ False

Question 5**1 / 1 pts**

When modeling a new quality attribute, an architect should pay attention to parameters which greatly affect the quality attribute.

☒ True

☐ False

Question 6**1 / 1 pts**

Architecture patterns must always be used independently of each other.

☐ True

☒ False

Question 7**1 / 1 pts**

In Agile projects, architecture documentation should be produced on demand rather than trying to create comprehensive documentation.

☒ True

☐ False

Question 8

1 / 1 pts

The primary reasons for building a software system are business goals.

☒ True

☐ False

Question 9

1 / 1 pts

The first step of the Attribute-Driven Design Method does not necessarily need to select the entire system as the first element to design.

☒ True

☐ False

Question 10

1 / 1 pts

You are completed with the generate and test process only when you have a design which satisfies architecturally significant requirements.

☐ True

☒ False

Question 11

1 / 1 pts

Raw view extraction will always lead to a comprehensible view of the system.

☐ True

☒ False

Question 12**1 / 1 pts**

Architecture reconstruction can be partially done using tools, but it is also possible to do it without the use of tools.

☒ True

☐ False

Question 13**1 / 1 pts**

Architecture reconstruction can aid in the maintenance of software and increase a system's lifetime.

☒ True

☐ False

Question 14**1 / 1 pts**

The Architecture Tradeoff Analysis Method separates the evaluation in two phases, where there is a difference in who participates in each phase.

☒ True

☐ False

Question 15

1 / 1 pts

Even though they might not be perfect, metrics can be still be useful indications of the health of a software project.

☒ True

☐ False

Question 16

1 / 1 pts

Utility-response curves can help to determine if the extra effort to get a better quality response is worth the cost.

☒ True

☐ False

Question 17**1 / 1 pts**

An architect should always aim to achieve 100 utility for every quality attribute in a software system.

☐ True

☒ False

Question 18**1 / 1 pts**

Architects need soft skills such as negotiation and communication in order to be successful.

☒ True

☐ False

Question 19**1 / 1 pts**

Defect elimination helps a software product line because new products will not have to spend effort to fix the same defects.

☒ True

☐ False

Question 20

1 / 1 pts

The quality attribute variability is especially important in order to create multiple products from a software product line.

☒ True

☐ False

Question 21

1 / 1 pts

Which system stakeholder is concerned if the architecture can be implemented on schedule and under budget.

☐ Customer

☐ Manager

☐ Architect

☒ All of the Above

Question 22

1 / 1 pts

If you are concerned with how components take over for each other in case of a failure and how the system might respond to a fault, you are most likely concerned with which quality attribute?

☐ Interoperability

☒ Availability

☐ Usability

☐ Modifiability

Question 23

1 / 1 pts

The response measure "number of hours required to make, test, and deploy a change to software" would be best suited for which quality attribute?

☐ Performance

☐ Usability

☒ Modifiability

☐ Testability

Question 24

1 / 1 pts

Having an active redundant that receives the same inputs as an active node is a tactic used for what quality attribute?

☐ Performance

☐ Interoperability

☐ Usability

☒ Availability

Question 25

1 / 1 pts

The ability to locate a service by searching through a known directory service is a tactic used for what quality attribute?

- ☐ Modifiability
- ☐ Testability
- ☒ Interoperability
- ☐ Performance

Question 26

1 / 1 pts

Scheduling resources is a tactic used for what quality attribute?

- ☒ Performance
- ☐ Testability
- ☐ Usability
- ☐ Interoperability

Question 27**1 / 1 pts**

Which security characteristic is concerned with not being able to modify data?

- ☐ Confidentiality
- ☒ Integrity
- ☐ Nonrepudiation
- ☐ Availability

Question 28**1 / 1 pts**

Which life-cycle stage is when the cost of developing a model is the highest but the confidence in the model is also the highest?

- ☐ Requirements
- ☐ Architecture
- ☐ Implementation
- ☒ Fielded System

Question 29**1 / 1 pts**

What size of project should require the most upfront work in the architecture phase?

- ☐ One project of 10 KSLOC
- ☐ One project of 100 KSLOC
- ☒ One project of 10,000 KSLOC
- ☐ They should all spend the same amount of time in the architecture phase

Question 30**1 / 1 pts**

For utility trees, what combination of business value (listed 1st) and effect on architecture (listed 2nd) would be the most desirable?

- ☐ H, H
- ☒ H, L
- ☐ L, H

☐ L, L

Question 31

1 / 1 pts

For utility trees, what combination of business value (listed 1st) and effect on architecture (listed 2nd) would be the least desirable?

☐ H, H

☐ H, L

☒ L, H

☐ L, L

Question 32

1 / 1 pts

What is defined as a known solution to a common problem in a given context?

☒ Pattern

☐ Design Checklist

☐ Framework

☐ Domain

Question 33

1 / 1 pts

The purpose of architecture documentation is:

☐ Means of education for developers

☐ Method of communication among stakeholders

☐ Basis for system analysis and construction

☒ All of the Above

Question 34

1 / 1 pts

Which architecture view is most likely to show how interfaces are defined and used?

☐ Module Views

☒ Component-and-Connector Views

☐ Allocation Views

Question 35

1 / 1 pts

Which architecture view is most likely to show how a software element is mapped to an environmental element?

☐ Module Views

☐ Component-and-Connector Views

☒ Allocation Views

Question 36

1 / 1 pts

Which architecture view is most likely to show a generalization relationship between two software units?

☒ Module Views

☐ Component-and-Connector Views

☐ Allocation Views

Question 37

1 / 1 pts

Which type of testing is often done immediately after implementation and is focused on testing modules in a standalone fashion?

☒ Unit Testing

☐ Integration Testing

☐ System Testing

☐ Acceptance Testing

Question 38

1 / 1 pts

Which type of testing does not use any knowledge about the internal design, structure, or implementation of software?

- ☐ Unit Testing
- ☐ Integration Testing
- ☐ White Box Testing
- ☒ Black Box Testing

Question 39

1 / 1 pts

Which software engineering position typically performs regular builds and integration tests?

- ☐ Developer
- ☒ Configuration Manager
- ☐ System Test Manager
- ☐ Product Manager

Incorrect

Question 40

0 / 1 pts

Attending architecture oriented conferences is a good example of what to improve individual architecture competence?

☐ Carrying out architectural duties

☒ Improving non-technical skills

☐ Mastering the body of knowledge