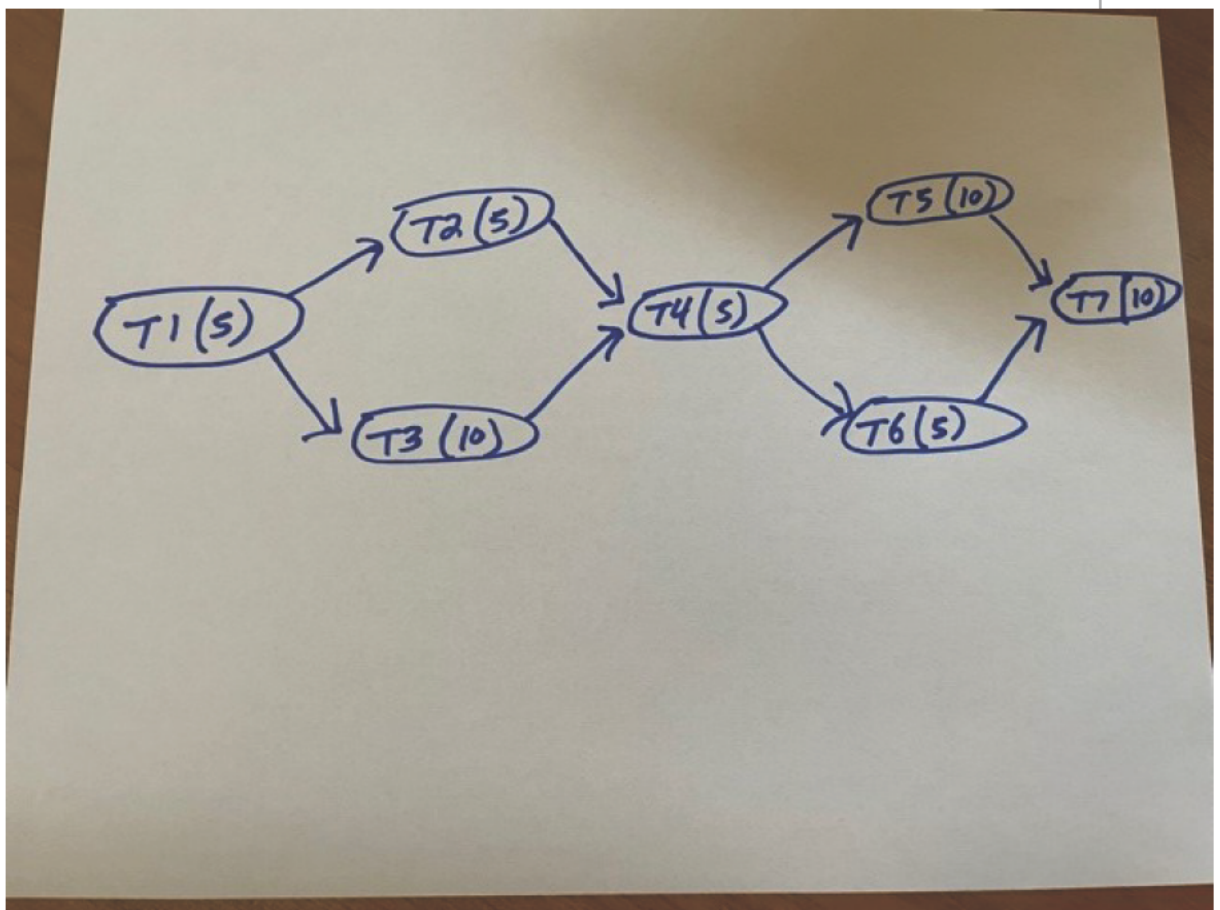


! Correct answers are no longer available.

Question 1

4 / 4 pts

Given the following PERT chart, what is the minimum time to complete this project with the critical path?



☐ 35

☐ 30

☐ 45

Question 2

4 / 4 pts

Which of the following statements best characterizes how a test coordinator would utilize the results of risk analysis in risk based testing?



Test high risk areas early in the test schedule and more thoroughly than others



Test high risk areas early in the test schedule and less thoroughly than others since they are likely to change



Test high risk areas late in the test schedule and more thoroughly than others



Ensure all areas of the system are tested equally and high risk tests are only executed if time permits

Question 3

4 / 4 pts

In Risk Based testing, which of the following is not reflected in the calculation of risk exposure?

☐ probability of a failure

☒ cost of testing

☐ consequences of a failure

Question 4

4 / 4 pts

Which of the following is not a factor in the PORT Test Efficiency through Test Prioritization technique:

☒ tester assigned priority for testing

☐ customer assigned priority

☐ requirements volatility

☐ fault proneness of requirement

Question 5

4 / 4 pts

Given the following earned values, is the project over, on, or under budget?

BCWS = 400

BCWP = 400

ACWP = 300

☐ Over budget

☐ On budget

☒ Under budget

Question 6

4 / 4 pts

Given the following tasks and earned values, is the project ahead of, on, or behind schedule after week 1?

1A	30	2A	20
1B	30	2B	50
1C	30		

Week 1 To be Completed: 1A, 1B, 1C

Week 1 Actually Completed: 1A, 1B, 2A at a cost of 100

☐ Ahead of schedule

☐ On schedule

☒ Behind schedule

Question 7

4 / 4 pts

Which of the following is a criteria which favors an outsourced staffed testing model versus in house testing?

☒ Project requirements are stable

- ☐ Project requirements are changing frequently
- ☐ Testing requires close interaction with development team
- ☐ Project requires high quality

Question 8

4 / 4 pts

Which of the following best describes a testing statement of work (SOW) in an outsourcing plan?



The SOW defines all of the tasks to be performed but does not identify processes to be followed.



The SOW defines all of the tasks to be performed but does not identify tools to be utilized.



The SOW defines all of the tasks to be performed and relevant processes to be followed.



The SOW provides captures all of the risks associated with the outsourcing plan and provides mitigation plans.

Question 9

4 / 4 pts

Which of the following best describes the relationship of cumulative number of failures and testing time during system testing?



The cumulative number of failures increases over time and then levels off



The cumulative number of failures remains constant over time



The cumulative number of failures increases over time and then decreases



The cumulative number of failures decreases over time

Question 10

4 / 4 pts

Which of following provides the best calculation of failure intensity?



Total number of failures detected during the testing process.



Number of failures detected per cpu hour of testing.



Number of failures detected divided by the number of hours of testing.



Ratio of the number of severe defects to less intense defects.

Question 11

4 / 4 pts

Which of the following best describes the relationship of failure intensity and testing time during system testing?



Failure intensity normally decreases over time



Failure intensity remains constant over time

- ☐ Failure intensity increases over time
- ☐ Failure intensity increases over time and then levels off

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4 / 4 pts

Which of the following statements best describes operational profile testing?

- ☐ Operational profile testing tests the most critical features more extensively.
- ☐ Operational profile testing tests features that are used least by users
- ☒ Operational profile testing tests features based on their usage by the customer.
- ☐ Operational profile testing provides a high degree of code coverage

Question 13

4 / 4 pts

Which of the following types of testing is best for verifying the behavior of the system meets its requirements when its resources are saturated and pushed beyond their limits.

- ☐ Volume testing
- ☒ Stress testing
- ☐ Security testing

☐ Regression testing

Question 14

4 / 4 pts

Which of the following techniques can best assist with managing the potential large number of tests needed for configuration testing?

☐ operational profile testing

☐ fuzz testing

☒ Design of Experiments

☐ functional testing

Question 15

4 / 4 pts

Which of the following is an example of a software serviceability requirement?

☒ The software should be fixed within 100 hours after a defect is reported

☐ The software MTBF should be 100 hours

☐ The software should be able to handle 500 users

☐ The software shall be available 99.9% of the time

Question 16

4 / 4 pts

Which of the following best describes the relationship between reliability and availability?

- ☐ High availability and low reliability cannot exist together
- ☐ High availability implies high reliability
- ☒ A system can have poor reliability but also high availability.
- ☐ Low availability implies low reliability

Question 17

4 / 4 pts

Which of the following is not a factor to consider in estimating the time that it will take to adequately test a software application?

- ☒ Planned delivery date
- ☐ Experience of the test team
- ☐ Desired quality level
- ☐ Number of product requirements

Question 18

4 / 4 pts

Which of the following best describes how a testing organization might utilize the GQM paradigm?

- ☒ Use GQM to reduce testing time and improve test effectiveness

- ☐ Use GQM to appease stakeholder wishes
- ☐ Use GQM to ensure code coverage
- ☐ Use GQM to ensure all requirements are tested

Question 19

4 / 4 pts

Which of the following is a false statement regarding reliability estimation models?

- ☒ Estimation models are used prior to test generation
- ☐ Estimation models utilize operational profile testing
- ☐ Estimation models make assumptions about defect repairs introducing new failures
- ☐ Estimation models generally follow mathematical distributions

Question 20

4 / 4 pts

Which of the following is a false statement regarding reliability growth models?

- ☒ Growth models do not use failure intensity as a reliability measurement
- ☐ Growth models help to determine when to stop testing
- ☐ Growth models require that the right data is collected during testing

- ☐ Growth models show how reliability changes over time

Question 21

4 / 4 pts

A confidence test suite in selective regression testing does not necessarily need to address which of the following?

- ☐ Critical functionality
- ☐ High frequency test cases
- ☒ Low frequency test cases of non-critical functions
- ☐ Functional breadth

Question 22

4 / 4 pts

Which of the following is not part of the criteria for reviewing an incident report?

- ☒ ensuring incident report contains priority
- ☐ assess for clarity
- ☐ assess for repeatability
- ☐ ensuring incident report contains severity evaluation

Question 23

4 / 4 pts

Which of the following is a false statement regarding defect severity and defect priority?

- ☒ All high severity defects are also high priority
- ☐ Some high severity defects might be low priority
- ☐ One component of defect severity is its impact on the customer
- ☐ One component of defect priority is based on the effort needed to repair the defect

Question 24

4 / 4 pts

Which of the following best describes a test case per the IEEE standard?

- ☒ A test case must have both input and output specifications
- ☐ A test case is targeted towards a particular error type
- ☐ A test case needs output specifications but not necessarily input specifications
- ☐ A test case must be formal

Question 25

4 / 4 pts

Which of the following is not a strategy to analyze what went wrong during a retrospective/post mortem?

- ☒ perform regression testing
- ☐ Interviews with important people involved
- ☐ Understanding team interactions
- ☐ Investigating major problems

Quiz Score: **100** out of 100

⚠ This quiz has been regraded; your score was not affected.

Final Exam

Due Dec 2, 2020 at 10:25am

Points 100

Questions 25

Available until Dec 2, 2020 at 10:25am

Time Limit 85 Minutes

This quiz was locked Dec 2, 2020 at 10:25am.

Attempt History

	Attempt	Time	Score	Regraded
LATEST	<u>Attempt 1</u>	14 minutes	84 out of 100	84 out of 100

⚠ Correct answers are no longer available.

Score for this quiz: **84** out of 100

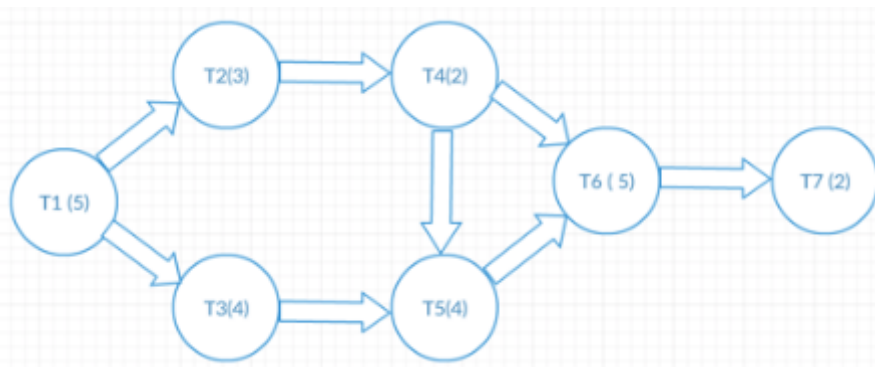
Submitted Dec 2, 2020 at 9:16am

This attempt took 14 minutes.

Question 1

4 / 4 pts

Given the following PERT chart, what is the minimum time to complete this project with the critical path?



☐ 20

☐ 25☒ 21☐ 17**Question 2****4 / 4 pts**

Which of the following statements best characterizes how a test coordinator would utilize the results of risk analysis in risk based testing?

☒

Test high risk areas early in the test schedule and more thoroughly than others

☐

Test high risk areas early in the test schedule and less thoroughly than others since they are likely to change

☐

Ensure all areas of the system are tested equally and high risk tests are only executed if time permits

☐

Test high risk areas late in the test schedule and more thoroughly than others

Question 3**4 / 4 pts**

Risk Based testing prioritizes the Risk Exposure of a feature defined as:

- ☐ severity of feature failure
- ☒ (probability of a failure) * (consequences of failure)
- ☐ cost of feature failure in terms of dollars
- ☐ (probability of a failure) + (consequences of failure)

Incorrect**Question 4****0 / 4 pts**

Which of the following is not a factor in the PORT Test Efficiency through Test Prioritization technique:

- ☐ requirements volatility
- ☐ cost of testing
- ☐ fault proneness of requirement
- ☒ customer assigned priority

Question 5**4 / 4 pts**

Given the following earned values, is the project over, on, or under budget?

BCWS = 400

BCWP = 200

ACWP = 300

- ☐ On budget

☒ Over budget

☐ Under budget

Question 6

4 / 4 pts

Given the following tasks and earned values, is the project ahead of, on, or behind schedule after week 1?

1A	30	2A	40
1B	30	2B	50
1C	30		

Week 1 To be Completed: 1A, 1B, 1C

Week 1 Actually Completed: 1A, 1B, 2A at a cost of 100

☐ On schedule

☒ Ahead of schedule

☐ Behind schedule

Question 7

4 / 4 pts

Which of the following is a criteria which favors an outsourced staffed testing model versus in house testing?

- ☐ Project requirements are changing frequently
- ☒ Project requirements are stable
- ☐ Testing requires close interaction with development team
- ☐ Project requires high quality

Question 8**4 / 4 pts**

Which of the following would not be included in a testing outsourcing statement of work?

- ☒ fixes for defects found
- ☐ test documentation that must be produced
- ☐ types of testing to be performed
- ☐ testing tools that must be utilized

Question 9**4 / 4 pts**

Which of the following best describes the relationship of cumulative number of failures and testing time during system testing?

- ☐ The cumulative number of failures remains constant over time
- ☐ The cumulative number of failures decreases over time



The cumulative number of failures increases over time and then decreases



The cumulative number of failures increases over time and then levels off

Question 10

4 / 4 pts

In measuring failure intensity, which of the following is the best measure of time?



Clock time of testing



CPU hours of testing



Person hours of testing



Number of people testing

Question 11

4 / 4 pts

Which of the following best describes the relationship of failure intensity and testing time during system testing?



Failure intensity increases over time and then levels off



Failure intensity increases over time



Failure intensity normally decreases over time



Failure intensity remains constant over time

Question 12**4 / 4 pts**

Which of the following statements best describes operational profile testing?

- ☒ Operational profile testing tests features based on how they are used by customers
- ☐ Operational profile testing provides a high degree of code coverage
- ☐ Operational profile testing is best performed during unit testing
- ☐ Operational profile testing tests features that are used least by users

Question 13**4 / 4 pts**

Which of the following types of testing is best for verifying whether the behavior of the system can meet its requirements when the system is subjected to a large amount of activity over an extended period of time?

- ☐ Regression testing
- ☐ Stress testing
- ☒ Volume testing
- ☐ Security testing

Question 14**4 / 4 pts**

What is the purpose of configuration testing?

☐

To verify that functional requirements are met for different configurations for the system

☐

To verify that functional and performance requirements are met for at least one of the system configurations

☒

To verify that functional and performance requirements are met for all configurations for the system

☐

To verify that performance requirements are met for different configurations for the system

Question 15**4 / 4 pts**

Which of the following is an example of a software serviceability requirement?

☒

The software should be fixed within 100 hours after a defect is reported

☐

The software shall be available 99.9% of the time

☐

The software MTBF should be 100 hours

☐

The software should be able to handle 500 users

Incorrect**Question 16****0 / 4 pts**

Which of the following best describes the relationship between reliability and availability?

- ☐ Low availability implies low reliability
- ☐ High availability and low reliability can exist together
- ☒ High availability implies high reliability
- ☐ High availability implies low reliability

Incorrect**Question 17****0 / 4 pts**

Which of the following is not a factor to consider in estimating the time that it will take to adequately test a software application?

- ☐ Desired quality level
- ☐ Planned delivery date
- ☐ Number of product requirements
- ☒ Experience of the test team

Question 18**4 / 4 pts**

Which of the following best describes how a testing organization might utilize the GQM paradigm?

- ☐ Use GQM to appease stakeholder wishes
- ☒ Use GQM to reduce testing time and improve test effectiveness
- ☐ Use GQM to ensure code coverage
- ☐ Use GQM to ensure all requirements are tested

Incorrect

Question 19 Original Score: 4 / 4 pts **Regraded Score: 4 / 4 pts**

⚠ This question has been regraded.

Which of the following is a false statement regarding reliability prediction models?

- ☒ Prediction models are used prior to test generation
- ☐ Prediction models utilize operational profile testing
- ☐ Prediction models make assumptions about defect repairs introducing new failures
- ☐ Prediction models generally follow mathematical distributions

Question 20

4 / 4 pts

Which of the following is a false statement regarding reliability growth models?

- ☐ Growth models help to determine when to stop testing

- ☒ Growth models do not use failure intensity as a reliability measurement
- ☐ Growth models show how reliability changes over time
- ☐ Growth models require that the right data is collected during testing

Question 21**4 / 4 pts**

A confidence test suite in selective regression testing does not need to address which of the following?

- ☐ High frequency test cases
- ☐ Functional breadth
- ☐ Critical functionality
- ☒ Low frequency test cases

Question 22**4 / 4 pts**

Which of the following is not part of the criteria for reviewing an incident report?

- ☐ ensuring incident report contains severity evaluation
- ☐ assess for repeatability
- ☒ ensuring incident report contains priority
- ☐ assess for clarity

Question 23**4 / 4 pts**

Which of the following is a false statement regarding defect severity and defect priority?

- ☒ All high severity defects are also high priority
- ☐ One component of defect priority is based on the effort needed to repair the defect
- ☐ Some high severity defects might be low priority
- ☐ One component of defect severity is its impact on the customer

Question 24**4 / 4 pts**

Which of the following best describes a test case per the IEEE standard?

- ☐ A test case must be formal
- ☐ A test case is targeted towards a particular error type
- ☐ A test case needs output specifications but not necessarily input specifications
- ☒ A test case must have both input and output specifications

Incorrect**Question 25****0 / 4 pts**

Which of the following is not a strategy to analyze what went wrong during a retrospective/post mortem?

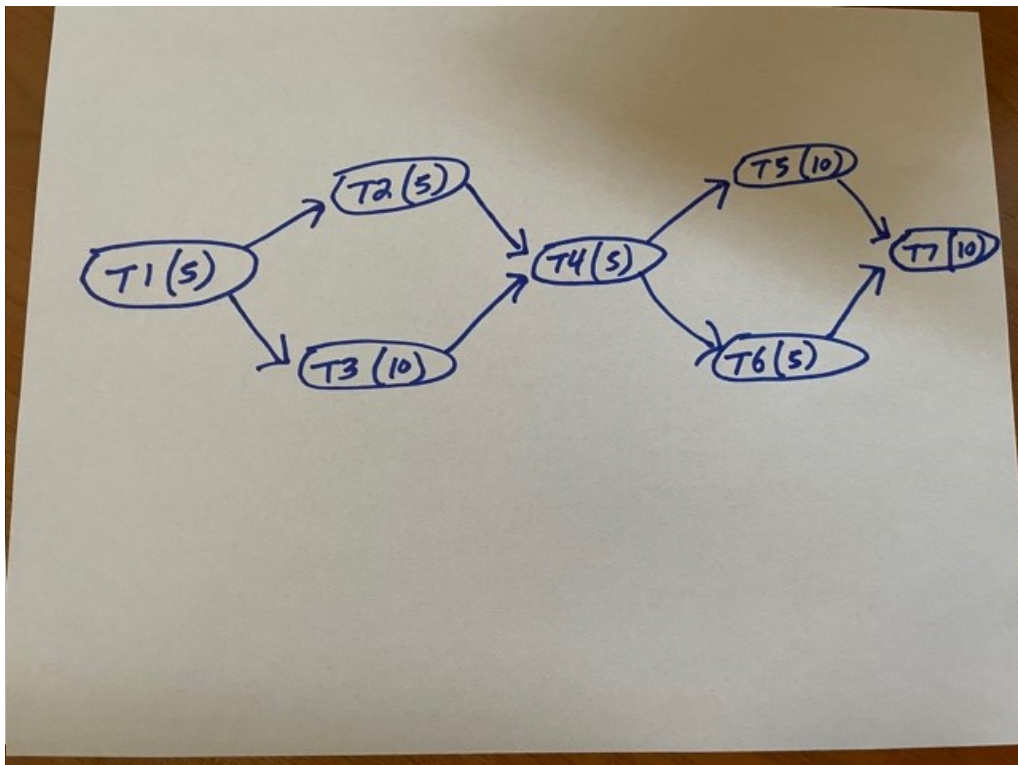
- ☐ Investigating major problems
- ☐ perform regression testing
- ☐ Understanding team interactions
- ☒ Interviews with important people involved

Quiz Score: **84** out of 100

Question 1

4 / 4 pts

Given the following PERT chart, what is the minimum time to complete this project with the critical path?



☒ 40

☐ 35

☐ 30

☐ 45

Question 2

4 / 4 pts

Which of the following statements best characterizes how a test coordinator would utilize the results of risk analysis in risk based testing?

- ☒ Test high risk areas early in the test schedule and more thoroughly than others
- ☐ Test high risk areas early in the test schedule and less thoroughly than others since they are likely to change
- ☐ Test high risk areas late in the test schedule and more thoroughly than others
- ☐ Ensure all areas of the system are tested equally and high risk tests are only executed if time permits

Question 3

4 / 4 pts

In Risk Based testing, which of the following is not reflected in the calculation of risk exposure?

- ☐ probability of a failure
- ☒ cost of testing

☐ consequences of a failure

Question 4

4 / 4 pts

Which of the following is not a factor in the PORT Test Efficiency through Test Prioritization technique:

☒ tester assigned priority for testing

☐ customer assigned priority

☐ requirements volatility

☐ fault proneness of requirement

Question 5

4 / 4 pts

Given the following earned values, is the project over, on, or under budget?

BCWS = 400

BCWP = 400

ACWP = 300

☐ Over budget

☐ On budget

☒ Under budget

Question 6**4 / 4 pts**

Given the following tasks and earned values, is the project ahead of, on, or behind schedule after week 1?

1A	30	2A	20
1B	30	2B	50
1C	30		

Week 1 To be Completed: 1A, 1B, 1C

Week 1 Actually Completed: 1A, 1B, 2A at a cost of 100

☐ Ahead of schedule

☐ On schedule

☒ Behind schedule

Question 7**4 / 4 pts**

Which of the following is a criteria which favors an outsourced staffed testing model versus in house testing?

☒ Project requirements are stable

☐ Project requirements are changing frequently

☐ Testing requires close interaction with development team

☐ Project requires high quality

Question 8

4 / 4 pts

Which of the following best describes a testing statement of work (SOW) in an outsourcing plan?

☐

The SOW defines all of the tasks to be performed but does not identify processes to be followed.

☐

The SOW defines all of the tasks to be performed but does not identify tools to be utilized.

☒

The SOW defines all of the tasks to be performed and relevant processes to be followed.

☐

The SOW provides captures all of the risks associated with the outsourcing plan and provides mitigation plans.

Question 9

4 / 4 pts

Which of the following best describes the relationship of cumulative number of failures and testing time during system testing?

☒

The cumulative number of failures increases over time and then levels off

- ☐ The cumulative number of failures remains constant over time
- ☐ The cumulative number of failures increases over time and then decreases
- ☐ The cumulative number of failures decreases over time

Question 10

4 / 4 pts

Which of following provides the best calculation of failure intensity?

- ☐ Total number of failures detected during the testing process.
- ☒ Number of failures detected per cpu hour of testing.
- ☐ Number of failures detected divided by the number of hours of testing.
- ☐ Ratio of the number of severe defects to less intense defects.

Question 11

4 / 4 pts

Which of the following best describes the relationship of failure intensity and testing time during system testing?

- ☒ Failure intensity normally decreases over time

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- ☐ Failure intensity increases over time
- ☐ Failure intensity increases over time and then levels off

Question 12

4 / 4 pts

Which of the following statements best describes operational profile testing?

- ☐ Operational profile testing tests the most critical features more extensively.
- ☐ Operational profile testing tests features that are used least by users
- ☒ Operational profile testing tests features based on their usage by the customer.
- ☐ Operational profile testing provides a high degree of code coverage

Question 13

4 / 4 pts

Which of the following types of testing is best for verifying the behavior of the system meets its requirements when its resources are saturated and pushed beyond their limits.

- ☐ Volume testing

☒ Stress testing

☐ Security testing

☐ Regression testing

Question 14

4 / 4 pts

Which of the following techniques can best assist with managing the potential large number of tests needed for configuration testing?

☐ operational profile testing

☐ fuzz testing

☒ Design of Experiments

☐ functional testing

Question 15

4 / 4 pts

Which of the following is an example of a software serviceability requirement?

☒

The software should be fixed within 100 hours after a defect is reported

☐ The software MTBF should be 100 hours

☐ The software should be able to handle 500 users

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Question 16

4 / 4 pts

Which of the following best describes the relationship between reliability and availability?

- ☐ High availability and low reliability cannot exist together
- ☐ High availability implies high reliability
- ☒ A system can have poor reliability but also high availability.
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Question 17

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Question 18

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Question 19

0 / 4 pts

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Growth models show how reliability changes over time

Question 21

4 / 4 pts

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Critical functionality



High frequency test cases



Low frequency test cases of non-critical functions



Functional breadth

Question 22

4 / 4 pts

Which of the following is not part of the criteria for reviewing an incident report?



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4 / 4 pts

Which of the following is not a strategy to analyze what went wrong during a retrospective/post mortem?

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☐ Interviews with important people involved

☐ Understanding team interactions

☐ Investigating major problems

Final Exam Results for Raghunath Reddy Mandapati

❗ Correct answers are no longer available.

Score for this quiz: **96** out of 100

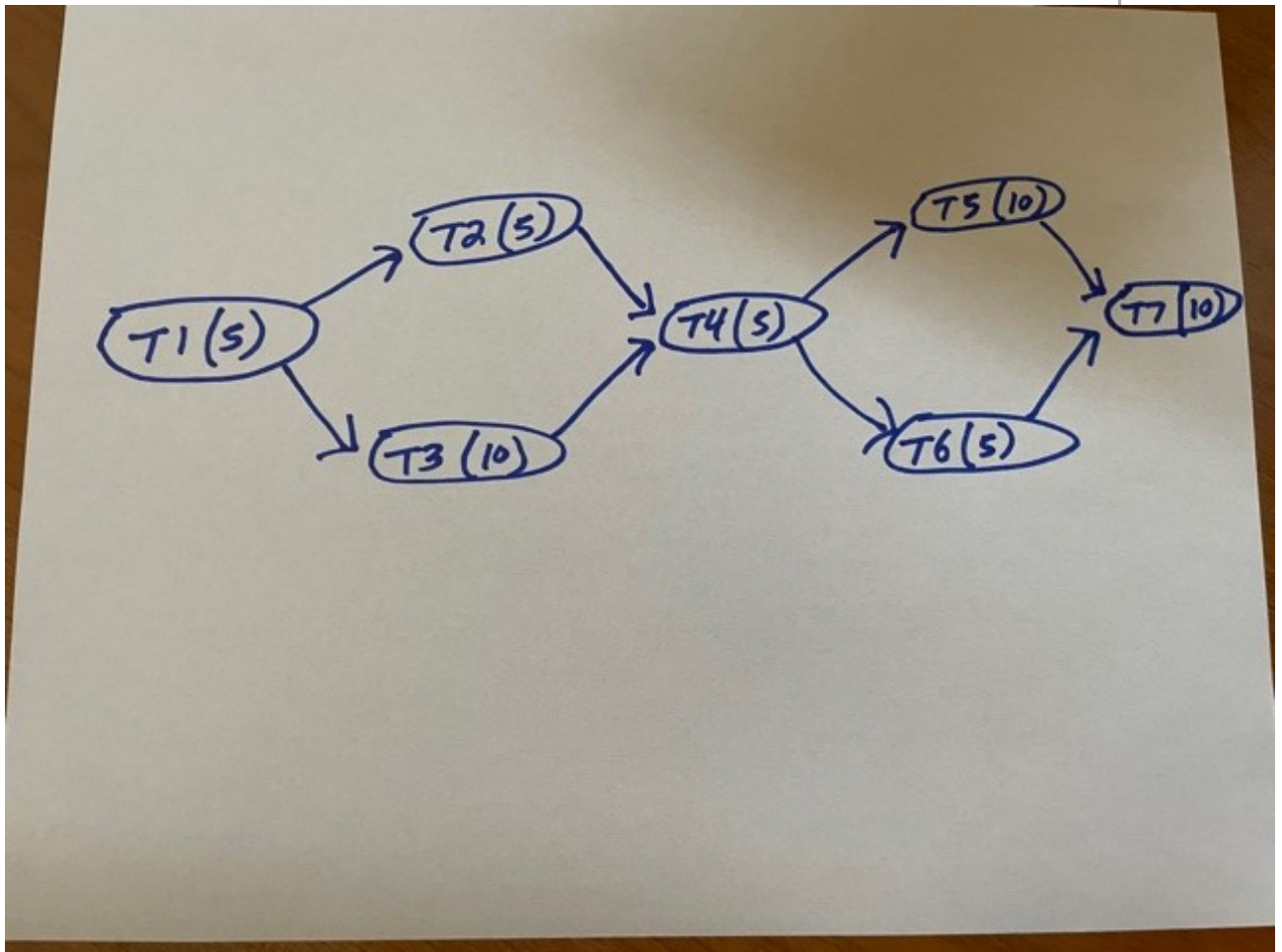
Submitted Dec 8, 2021 at 8:35am

This attempt took 62 minutes.

Question 1

4 / 4 pts

Given the following PERT chart, what is the minimum time to complete this project with the critical path?



☒ 40

☐ 35

☐ 30

☐ 45

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4 / 4 pts

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4 / 4 pts

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4 / 4 pts

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Incorrect

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0 / 4 pts

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4 / 4 pts

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The cumulative number of failures remains constant over time



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4 / 4 pts

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4 / 4 pts

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Question 12**4 / 4 pts**

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- ☐ Security testing
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Which of the following techniques can best assist with managing the potential large number of tests needed for configuration testing?

- ☐ operational profile testing
- ☐ fuzz testing
- ☒ Design of Experiments
- ☐ functional testing

Question 15**4 / 4 pts**

Which of the following is an example of a software serviceability requirement?



The software should be fixed within 100 hours after a defect is reported

- ☐ The software MTBF should be 100 hours
- ☐ The software should be able to handle 500 users
- ☐ The software shall be available 99.9% of the time

Question 16

4 / 4 pts

Which of the following best describes the relationship between reliability and availability?

- ☐ High availability and low reliability cannot exist together
- ☐ High availability implies high reliability
- ☒ A system can have poor reliability but also high availability.
- ☐ Low availability implies low reliability

Question 17

4 / 4 pts

Which of the following is not a factor to consider in estimating the time that it will take to adequately test a software application?

- ☒ Planned delivery date
- ☐ Experience of the test team
- ☐ Desired quality level
- ☐ Number of product requirements

Question 18**4 / 4 pts**

Which of the following best describes how a testing organization might utilize the GQM paradigm?

- ☒ Use GQM to reduce testing time and improve test effectiveness
- ☐ Use GQM to appease stakeholder wishes
- ☐ Use GQM to ensure code coverage
- ☐ Use GQM to ensure all requirements are tested

Question 19**4 / 4 pts**

Which of the following is a false statement regarding reliability estimation models?

- ☒ Estimation models are used prior to test generation

- ☐ Estimation models utilize operational profile testing
- ☐ Estimation models make assumptions about defect repairs introducing new failures
- ☐ Estimation models generally follow mathematical distributions

Question 20**4 / 4 pts**

Which of the following is a false statement regarding reliability growth models?

- ☒ Growth models do not use failure intensity as a reliability measurement
- ☐ Growth models help to determine when to stop testing
- ☐ Growth models require that the right data is collected during testing
- ☐ Growth models show how reliability changes over time

Question 21**4 / 4 pts**

A confidence test suite in selective regression testing does not necessarily need to address which of the following?

- ☐ Critical functionality
- ☐ High frequency test cases
- ☒ Low frequency test cases of non-critical functions
- ☐ Functional breadth

Question 22**4 / 4 pts**

Which of the following is not part of the criteria for reviewing an incident report?

- ☒ ensuring incident report contains priority
- ☐ assess for clarity
- ☐ assess for repeatability
- ☐ ensuring incident report contains severity evaluation

Question 23**4 / 4 pts**

Which of the following is a false statement regarding defect severity and defect priority?

- ☒ All high severity defects are also high priority
- ☐ Some high severity defects might be low priority
- ☐ One component of defect severity is its impact on the customer
- ☐ One component of defect priority is based on the effort needed to repair the defect

Question 24**4 / 4 pts**

Which of the following best describes a test case per the IEEE standard?

- ☒ A test case must have both input and output specifications
- ☐ A test case is targeted towards a particular error type
- ☐ A test case needs output specifications but not necessarily input specifications
- ☐ A test case must be formal

Question 25**4 / 4 pts**

Which of the following is not a strategy to analyze what went wrong during a retrospective/post mortem?

- ☒ perform regression testing
- ☐ Interviews with important people involved
- ☐ Understanding team interactions
- ☐ Investigating major problems

Quiz Score: **96** out of 100

Midterm Exam Results for Raghunath Reddy Mandapati

❗ Correct answers are no longer available.

Score for this quiz: **95** out of 100

Submitted Oct 25, 2021 at 10:23am

This attempt took 79 minutes.

Question 1

4 / 4 pts

Which of the following best describes the difference between verification and validation?

- ☐ Validation answers the question: are we building the product right.
- ☐ Verification answers the question are we building the right product.
- ☒ Validation primarily targets requirements errors.
- ☐ Verification primarily targets requirements errors.

Question 2

5 / 5 pts

Consider the following specification for a program:

A computerized letter is to be sent to high school seniors telling them their graduation status. There are three inputs.

The first input is a 10 digit identifying number (ID Number).

The second input is the student's grade point average (gpa) which is a real number.

The third input is a real number indicating the balance of the student's account.

For students with $0 \leq \text{gpa} < 1.0$ a letter is output informing the student that they will not graduate. For $1.0 \leq \text{gpa} \leq 3.0$ a letter is output informing the student that they have met the requirements for graduation. For $3.0 \leq \text{gpa} < 3.7$ a letter is output informing the student that they will graduate with honors. For $3.7 \leq \text{gpa} \leq 4.0$ a letter is output informing the student they will graduate with highest honors. The letter also contains the balance of the student's account.

Which of the following best describes the set of equivalence partitions for gpa.

☐ gpa < 0 (I)

☐ gpa > 4 (I)

☐ $0 \leq \text{gpa} \leq 4$ (V)



☐ gpa < 0 (I)

☐ gpa > 4 (I)

☐ $0 \leq \text{gpa} < 1.0$ (V)

☐ $1.0 \leq \text{gpa} < 3.0$ (V)

☐ $3.0 \leq \text{gpa} < 3.7$ (V)

☒ $3.7 \leq \text{gpa} \leq 4.0$ (V)

☐ gpa < 0 (I)

☐ gpa >4 (I)

☐ 0 <= gpa < 1.0 (I)

☐ 1.0 <= gpa < 3.0 (V)

☐ 3.0 <= gpa < 3.7 (V)

☐ 3.7<= gpa <= 4.0 (V)

☐ gpa < 0 (I)

☐ gpa >4 (I)

☐ 1.0 <= gpa < 3.0 (V)

☐ 3.0 <= gpa < 3.7 (V)

☐ 3.7<= gpa <= 4.0 (V)

Question 3

4 / 4 pts

Which of the following is considered to be a data flow anomaly?

☐ Defining a variable more than once in a module

☐ Defining a variable, using it, and then redefining it

☒ Referencing an undefined variable

☐ Referencing a redefined variable

Question 4**5 / 5 pts**

Consider the following code segment:

if A < B

then

 exchange A and C

else

 exchange A and B;

endif;

if B < C then

 exchange A and C:

endif:

Which of the following is the final symbolic values for A, B, C on the TT path?

Final Value of A = C_0

Final Value of B = A_0

☐ Final Value of C = B_0

Final Value of A = C_0

Final Value of B = B_0

☐ Final Value of C = A_0

Final Value of A = A_0

Final Value of B = B_0

☒ Final Value of C = C_0

Final Value of A = B_0

Final Value of B = C_0

☐ Final Value of C = A_0

Question 5

5 / 5 pts

Given 4 inputs: P1 with values A,B; P2 with value C, P3 with values F, X, and P4 with values G, H, W, which of the following tests provides pairwise combination testing?



G	A	F	C
G	B	X	C
H	A	X	C
H	B	F	C
W	A	X	C
W	B	F	C



G	A	F	C
G	B	X	C
H	A	F	C
H	B	X	C
W	A	F	C
W	B	F	C



G	A	F	C
G	B	X	C
H	A	X	C
W	B	F	C



G	A	F	C
G	B	X	C
H	A	X	C
H	B	X	C
W	A	X	C
W	B	F	C

Question 6

5 / 5 pts

Which of the following is the cyclomatic complexity of the code given

below?

if $A < B$ then

 exchange A and B:

endif;

if $B < C$ then

 exchange B and C

endif;

☐ 2

☒ 3

☐ 4

☐ 1

Question 7

4 / 4 pts

Given the code below, how many test cases are needed to achieve 100% multiple condition coverage?

If $a > 15$ or $b < 2$ or $c > 5$

 then $Y = 25$

 else $Y = 30$;

If $w > 5$ or $z < 10$

 then $X = 14$

else X = 0;

☐ 4

☐ 16

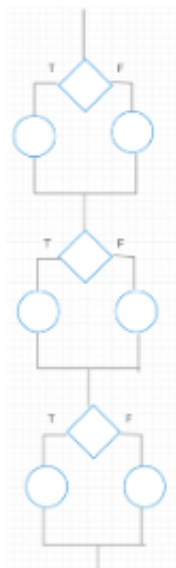
☒ 8

☐ 32

Question 8

5 / 5 pts

Which of the following is a possible set of basis paths for the given control flow diagram.



☒ TTT / FTT / TFT / TTF

☐ TTT / TFT / TTF☐ TTT / FTT / FFT / FFF☐ TTT / TTF / TFT / TFF / FTT / FTF / FFT / FFF

Incorrect

Question 9

0 / 5 pts

A new program for calculating auto insurance policy renewal premiums has been developed the the following rules. If one were to develop a decision table for testing this program, how many test cases / columns would be needed?

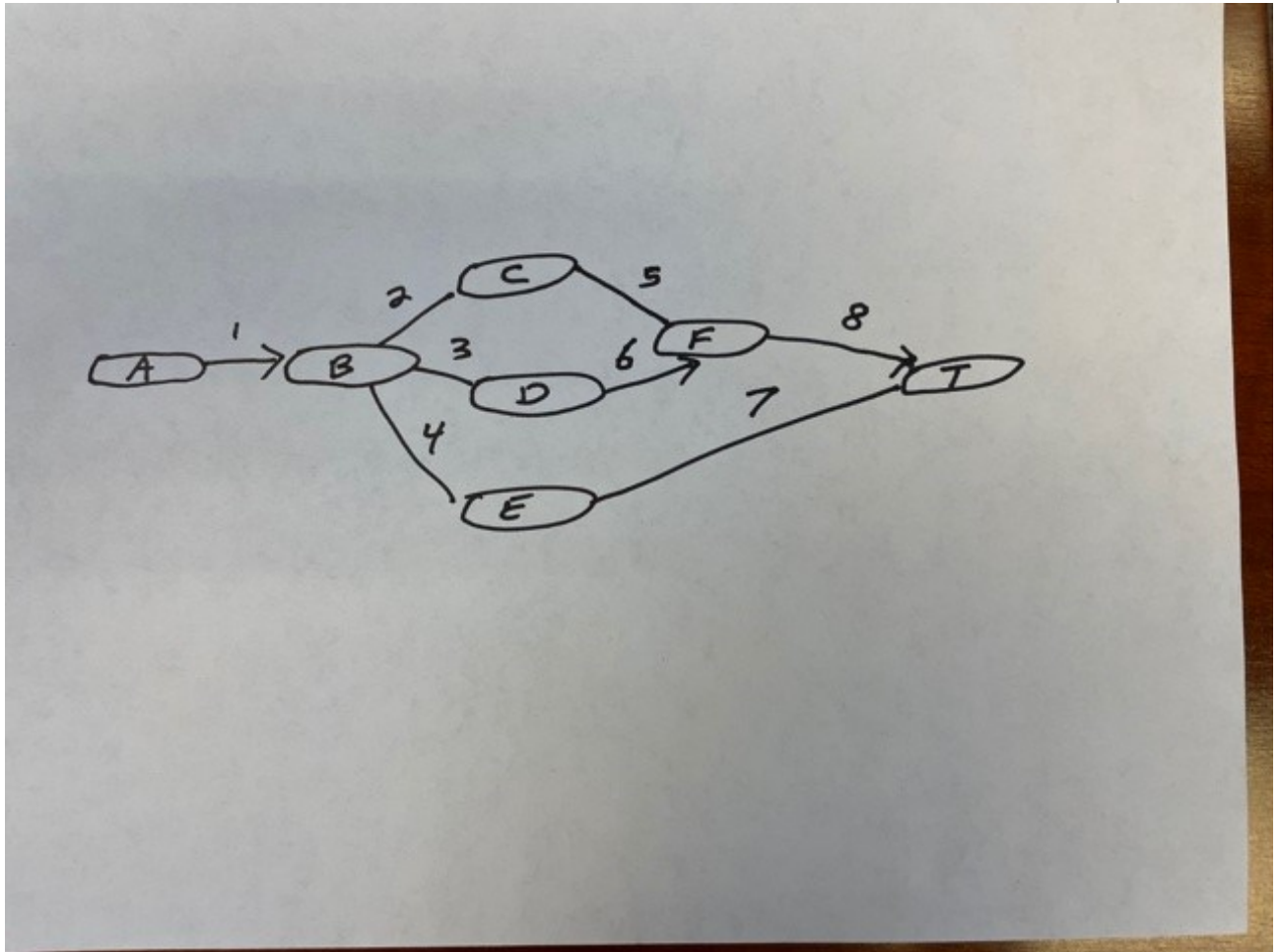
- *0 claims, age less than or equal to 22: raise by \$50;*
- *0 claims, age greater than 22: raise by \$25*
- *1 claims, age less than or equal to 22: raise by \$100;*
- *1 claims, age greater than 22: raise by \$50*
- *2 claims, age less than or equal to 22: raise by \$200;*
- *3 or more claims regardless of age: cancel policy*

☒ 6☐ 4☐ 8☐ 12**Question 10**

5 / 5 pts

Given the state testing diagram below, how many test sequences would one find in the state testing tree?

You may assume "A" is the start state and "T" is the terminal state.



☐ 2

☒ 3

☐ 5

☐ 6

Question 11**3 / 3 pts**

Which of the following is considered a classic testing mistake?

- ☒ not focusing on usability issues
- ☐ documenting and reviewing test designs
- ☐ good communication with developers
- ☐ Believing the primary objective of system testing is to find important bugs

Question 12**5 / 5 pts**

Given the code and test cases below, what is the highest level of test coverage achieved by executing all of the tests?

```
read (w, x, y, z)
```

```
if x > 20 and y > 4
```

```
    then s1
```

```
    else s2
```

```
endif;
```

```
if z < 50 and w > 10
```

```
    then s3
```

else s4

endif;

Test #1	Test#2	Test#3	Test#4
x=25	x=15	x=30	x=5
y=3	y=2	y=6	y=10
z=55	z=75	z=25	z=3
w=15	w=5	w=25	w=20

- ☐ statement coverage
- ☐ decision coverage
- ☒ decision / condition coverage
- ☐ multiple condition coverage
- ☐ No level of control flow coverage achieved

Question 13

3 / 3 pts

Which statement best describes Test-Driven Development TDD?

- ☐ TDD uses code to drive test case development.
- ☒ TDD creates test cases before software is developed.
- ☐ TDD is used to ensure full code coverage.

☐ none of the above are correct

Question 14

3 / 3 pts

What is an advantage of model based test development?



If there is a change in the model, new tests can automatically be generated



If there is a change in the model, tests will remain the same



Model based test development executes the system



There are a set number of test generation criteria we can use

Question 15

6 / 6 pts

Assume we are testing a function with 3 variables:

Variable A: has values 0 and 1

Variable B: has values 0 and 1

Variable C: has values 0 and 1

What is the total 2-way variable value configuration coverage achieved by the following tests:

A=0; B=0; C=0

A=0; B=1; C=1

A=1, B=1, C=1

☐ 9/12

☒ 8/12

☐ 3/8

☐ 6/8

Question 16

3 / 3 pts

What is the difference between mutation based fuzz testing and generation based fuzz testing?

☒ Mutation based fuzz testing does not require knowledge of inputs to create test data. Generation based fuzz testing needs to know specifications of the test input to create random test data.

☐ Mutation based fuzz testing needs to know specifications of the test input to create random test data. Generation based fuzz does not require knowledge of inputs to create test data.

☐

There is no difference between mutation and generation based fuzz testing.

☐

Mutation based fuzz testing injects mutants / errors into the code based on typical defect types and frequencies.

Question 17

3 / 3 pts

Which of the following best describes metamorphic testing?

☐

Metamorphic testing integrates with test oracles to determine expected results.

☐

Metamorphic testing utilizes metamorphic relations to determine test inputs.

☒

Metamorphic testing utilizes metamorphic relations to determine expected results.

☐

Metamorphic testing is a form of fuzz testing.

Question 18

3 / 3 pts

In defect based testing, a defect taxonomy is used...?

- ☒ To derive test cases
- ☐ To classify defects when test cases fail
- ☐ When performing only system level testing
- ☐ To categorize test cases once test cases are developed

Question 19

3 / 3 pts

Which of the following best describes tours in exploratory testing?

- ☐
Tour testing ensures 100% functional and code coverage during exploratory testing.
- ☐ Tour testing consists of randomly exploring the product.
- ☒
Tour testing uses a structure or method that gives the tester a particular focus in the way he or she goes about exploring a product.
- ☐
Tour testing is performed with the customer to provide them with an overview of product capabilities.

Question 20**5 / 5 pts**

Consider testing utilizing equivalence partitioning a program with the following 2 inputs and equivalence partitions? Which of the following describes the minimum number of tests needed?

Input 1: X

1..10 (V)

11.. 50 (V)

<1 (I)

> 50 (I)

Input 2: Y

50..75 (V)

76.. 80 (V)

81..100 (V)

<50 (I)

> 100 (I)

☒ 3 valid tests and 4 invalid tests

☐ 4 valid tests and 4 invalid tests

☐ 2 valid tests and 2 invalid tests

☐ 1 valid and 2 invalid tests

Question 21**5 / 5 pts**

Given the following code and test cases, is the following true or false:

"all uses" data flow coverage is achieved for variable "x"?

x := 0; (notation means assign 0 to X)

y:= 0;

read (a,b);

if a > 10

 then x := 5

 else y:= 5;

if b > 10

 then z := x + y

 else z:= x + y;

Test 1. a = 19, b = 15

Test 2. a = 5, b = 16

Test 3 a = 20 b = 5

Test 4 a = 6 b = 4

☒ True☐ False**Question 22****5 / 5 pts**

Given the following code and test cases, is the following true or false:

"all uses" data flow coverage is achieved for variable "y"?

x := 0; (notation means assign 0 to X)

y:= 0;

read (a,b);

if a > 10

 then x := 5

 else y:= 5;

if b > 10

 then z := x + y

 else z:= x + y;

Test 1. a = 19, b = 15

Test 2. a = 5, b = 16

Test 3 a = 20 b = 5

Test 4 a = 6 b = 4

☒ True☐ False**Question 23****6 / 6 pts**

Consider the following code segment:

if $A < C$

then

 exchange A and C

else

 exchange A and B;

endif;

if $B < C$ then

 exchange B and C:

endif:

What is the path expression for the TT path?

☒ $(A_0 < C_0) \text{ and } (B_0 < A_0)$ ☐ $(A_0 < C_0) \text{ and } (B_0 < C_0)$ ☐ $(A_0 < C_0) \text{ or } (B_0 < A_0)$ ☐ $(A_0 < C_0) \text{ and } (C_0 < A_0)$

Quiz Score: **95** out of 100