

Name: _____

Student#: _____

CSE Account: _____

Points: _____ /9

Show all work clearly and in order, and underline your final answers. Use Eiffel notation when necessary, sketch all relevant graphs and write down all relevant mathematics. You have 20 minutes to take this 9 points (3%) quiz.

1. Does testing prove correctness of the software?
 - A. True
 - B. False

2. Which of the following statements is correct?
 - A. Testing shows the presence, not the absence of bugs
 - B. Testing shows neither the presence, nor the absence of bugs
 - C. Testing shows the absence, not the presence of bugs
 - D. Testing shows both the presence and the absence of bugs

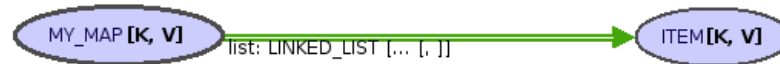
3. Which of the following statements is correct?
 - A. Specification is expressed in a Problem Domain and Requirements in a Solution Domain
 - B. Specification is expressed in a Solution Domain and Requirements in a Problem Domain
 - C. Both Requirements and Specification are expressed in a Problem Domain
 - D. Both Requirements and Specification are expressed in a Solution Domain

4. What is a role of a *class invariant*?
 - A. It is used to validate the correctness of the feature's execution
 - B. It is used for a constant validation of the object's state
 - C. It is used to validate the correctness of parameters' values
 - D. It is used to validate the loop execution

5. What is a role of a *require statement*?
 - A. It is used to validate the correctness of the feature's execution
 - B. It is used for a constant validation of the object's state
 - C. It is used to validate the correctness of parameters' values
 - D. It is used to validate the loop execution

6. What is a role of an *ensure statement*?
 - A. It is used to validate the correctness of the feature's execution
 - B. It is used for a constant validation of the object's state
 - C. It is used to validate the correctness of parameters' values
 - D. It is used to validate the loop execution

7. What is the meaning of the following BON diagram?



- A. Class ITEM inherits from class MY_MAP
 - B. Class ITEM is a client of class MY_MAP
 - C. Class MY_MAP is a client of class ITEM
 - D. Class MY_MAP inherits from class ITEM
8. What is the proper order of activities in a Test Driven Development (TDD)?
- A.
 - 1. create a skeleton of a class without implementation,
 - 2. implement features
 - 3. implement tests for each feature,
 - B.
 - 1. implement tests for each feature,
 - 2. create a skeleton of a class without implementation,
 - 3. implement features
 - C.
 - 1. implement the class,
 - 2. implement tests for each feature
 - D.
 - 1. create a skeleton of a class without implementation,
 - 2. implement tests for each feature,
 - 3. implement features

9. Consider the following Eiffel code. What is the role of `make` feature and who can execute this feature?

```
class TRANSACTION create
  make
feature {TELLER} -- private
  make (v: INTEGER; d: DATE)
    -- create transaction with value 'v' and date 'd'
  require
    d/= Void
  ensure
    value_set: value = v and date = d
  end
  ...
invariant
  value >= 0 and date /= Void
end
```

- A. `make` is a constructor and any class can execute it
- B. `make` is a constructor and only `TELLER` class can execute it
- C. `make` is a constructor and only `TRANSACTION` class can execute it
- D. `make` is a setter feature for attributes and only `TELLER` class can execute it

Answers

1. B 2. A 3. B 4. B 5. C 6. A 7. C 8. D 9. B