Name:

ID:

UML Test with Solution

Question 1: Choose the correct answer

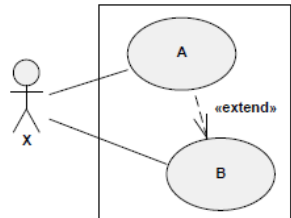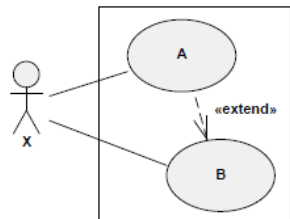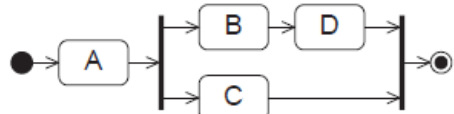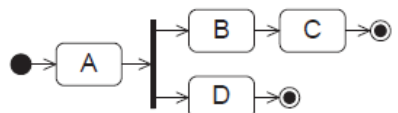|	

1) What is an object?
  A. An object is an instance of a class.
  B. An object includes encapsulation of data.
  C. An object is not an instance of a class.
  D. All of the mentioned.
	2) Which of the following are the valid relationships in Use Case Diagrams?
	  A. Generalization.
	  B. Include.
	  C. Extend.
	  D. All of the mentioned.

3) What is a collection of operations that specify a service of a class or component?
  A. Use Case.
  B. Actor.
  C. Interface.
  D. Relationship.
	4) Which of the following UML diagrams has a static view?
	  A. Collaboration.
	  B. Use case.
	  C. State chart.
	  D. Activity.

5) The name to diagram that represents the flow of activities described by the use cases and at the same time the actors involved in UML?
  A. State diagram.
  B. Swim lane diagram.
  C. Activity diagram.
  D. Collaboration diagram.
	6) A fork node of a UML2 activity diagram?
	  A. is used for modeling parallel threads
	  B. Deletes tokens, which are not accepted.
	  C. Is only valid when combined with a join node.
	  D. Is an alternative to the decision node.
	  E. Produces tokens for all outgoing edges.

7) Activity diagram, use case diagram, collaboration diagram and sequence diagram are considered as types of?
  A. Non-behavioral diagrams.
  B. Non-structural diagrams.
  C. Structural diagrams.
  D. Behavioral diagrams.
	8) Kind of diagrams which are used to show interactions between series of messages are classified as?
	  A. Activity diagrams.
	  B. State chart diagrams.
	  C. Collaboration diagrams.
	  D. Object lifeline diagrams.

9) Which of the following statements about the given diagram clipping are true?
  A. A can execute the same use cases as B.
  B. B inherits all of A's associations.
  C. B can only execute the same use cases as A.
  D. A inherits all of B's associations.	

10) What kind of objects are A, B and C?
  A. A is an entity, B is a controller, C is a boundary.
  B. A is a boundary, B is an entity, C is a controller.
  C. A is an entity, B is a boundary, C is a controller.
  D. A is a controller, B is an entity, C is a boundary.
  E. A is a boundary, B is a controller, C is an entity.
  F. A is a controller, B is a boundary, C is an entity.
	11) Which kind of icon would you use to represent a business object containing useful information?
	  A. A.
	  B. B.
	  C. C.

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12) Which kind of icon would you use to represent a communication path between systems or between a human and a system? A. A. B. B. C. C.	13) Which kind of icon would you use to represent an object that coordinates a system process, creates objects or retrieves objects? A. A. B. B. C. C.
14) The following <<extend>> relationship means: A. B can be executed instead of A B. A cannot be executed without B C. B might or might not invoke A D. A might or might not invoke B E. B always has to invoke A 	15) The following <<extend>> relationship means: A. B can extend A B. A can extend B
16) Which of the following statements about actions in a UML activity diagram are true? A. An action consists of several activities. B. Actions can manipulate objects and their values. C. Actions are not atomic.	17) You are given the following activity diagram. Which of the following action sequences are possible during one execution of the activity diagram? A. A → B → C → D B. A → B → D → C C. A → C D. A → B → D E. A → C → B → D
18) You are given the following activity diagram. Which of the following action sequences are possible during one execution of the activity diagram? A. A → B → C → D B. A → B → D → C C. A → B → C D. A → B → D E. A → D 	19) Class diagram, component diagram, object diagram and deployment diagram are considered as types of A. structural diagrams B. behavioral diagrams C. non-behavioral diagrams D. non-structural diagrams

20) Which of the following diagrams represent this description?
"Customers of the garage can buy cars. Customers with a bad credit should pay an extra down payment".

a)

b)

c)

d)
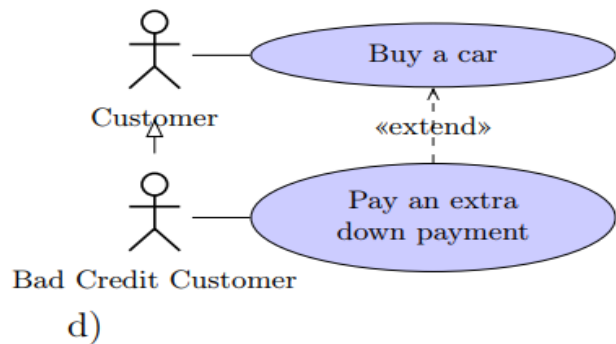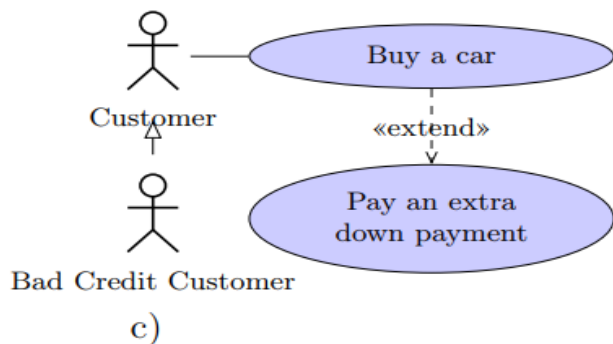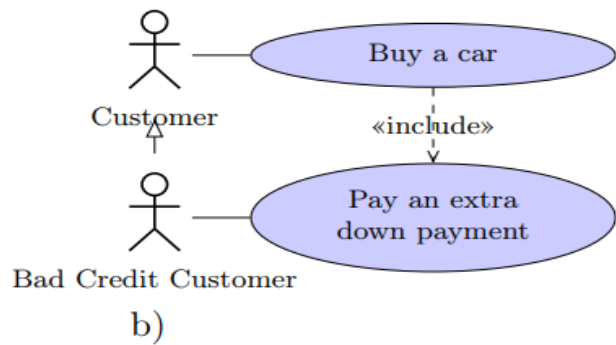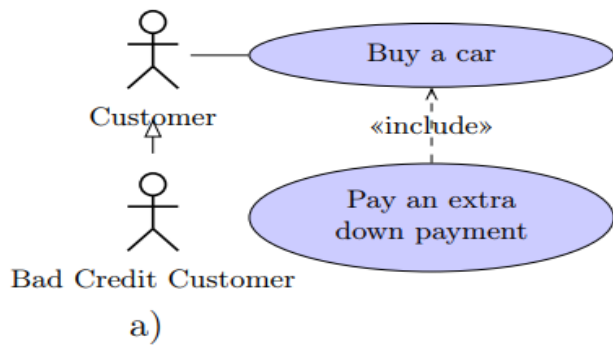
Question 2: Functional/Quality

1) The system shall be available in English, German and French.
2) The system shall allow the user to search for books by author and title.
3) The system shall provide a list of all previously ordered books to the user.
4) The system shall support minimum 1000 transactions per hour.
5) The system shall be available to all users 24/7.
6) The system shall allow the user to remove books from the shopping cart at any moment.

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Question 3: Yes/No
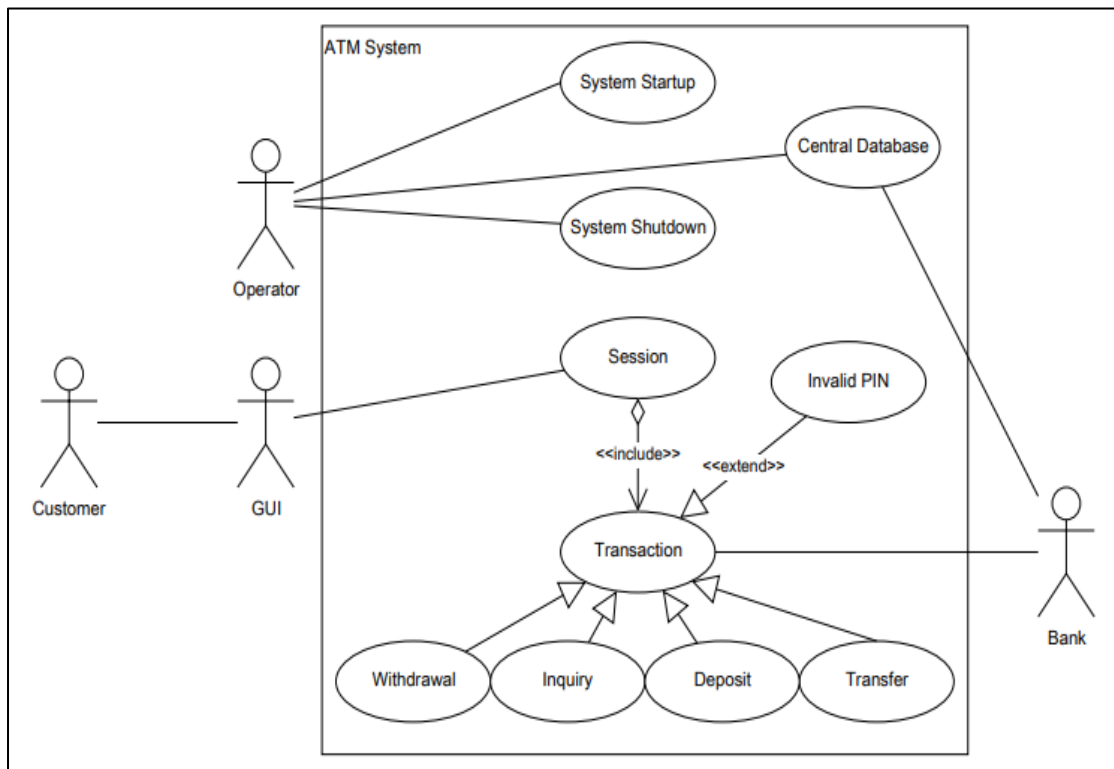
1) According to the diagram, Transaction is an abstract superclass for Withdrawal, Inquiry, Deposit, Transfer and Invalid PIN.
2) The relation between Invalid PIN and Transaction does not conform to the UML standard.
3) The use case should clarify in what direction data is transferred to and from the Central Database.
4) The Central Database should be moved outside the ATM System box, but the connections should be kept.
5) The relation between the Customer and the GUI is not permitted in UML use case diagram syntax.
6) The relations connecting the Operator, GUI and Bank to the ATM System are missing the arrows.

Question 1 Answers:

Question	Answers	Question	Answers
1)	A	11)	B
2)	D	12)	C
3)	C	13)	A
4)	B	14)	C
5)	B	15)	B
6)	A	16)	B
7)	D	17)	A, B, E
8)	C	18)	C, D, E
9)	B	19)	A
10)	D	20)	D

Question 2 Answers:

1) Quality.
2) Functional.
3) Functional.
4) Quality.
5) Quality.
6) Functional.

Question 3 Answers:

1) False.
2) True.
3) False.
4) False.
5) True.
6) False.