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Test bank for accounting information systems 1st edition by richardson chang and smith

Chapter 04

Relational Databases and Enterprise Systems

True / False Questions

1. Three types of data models used today are: the hierarchical model, the network model and the relational model.
True False
2. In a hierarchical data model, data elements are related in many-to-many relationships.
True False
3. Classes could be grouped into Resources (R), Entity (E), and Assets (A) in data modeling. True False
4. Queries in Access are utilized by users to enter data into tables and view existing records. True False
5. The SQL command "Group by" can be used to order an amount in a descending order.
True False
6. The asterisk (*) following the SELECT SQL statement is a wild card indicating all columns should be selected.
True False
7. The "Where" SQL clause can be used to link two tables.
True False

8. Access offers modules, which are defined by users to automate processes like opening a specific form.

True False

9. In Access, users can edit database information in reports. True False

10. Cloud computing is an internet-based computing where shared resources, software, and information is provided to firms on demand.
- True False
11. While hierarchical and network data models require relationships to be formed at the database creation, relational data models can be made up as needed.
- True False
12. Each attribute in a table can have several names. True False
13. Access is a simple database management system that can be used to run databases for individuals and small firms.
- True False
14. SQL is based on relational algebra and allows a user to query and update the database. True False
15. In a database, while queries allow the user to access, read and report on desired data, the responsibility of actually making physical changes to the relational database belongs to the Database Management System (DBMS).
- True False

Multiple Choice Questions

16. Which type of data models allows each record to have multiple parent and child records?
- A. The hierarchical mode
 - B. The network model
 - C. The relational model
 - D. None of the above
17. Which of the following correctly describes the Referential Integrity Rule?
- A. The primary key of a table must have data values (cannot be null)
 - B. Each attribute in a table must have a unique name
 - C. The data value for a foreign key could be null
 - D. Values of a specific attribute must be of the same type

18. Which of the following tasks cannot be performed through queries in access?
- A. Retrieve and display data
 - B. Calculations of data
 - C. Data sorting
 - D. Enter data into tables
19. In Microsoft Access, we use tables in a database for:
- A. Data entry
 - B. Data storage
 - C. Data retrieval
 - D. Two of the above are correct.
20. A company would like to implement a management information system that integrates all functional areas within an organization to allow information exchange and collaboration among all parties involved in business operations. Which of the following systems is most effective for this application?
- A. A decision support system.
 - B. An executive support system.
 - C. An office automation system.
 - D. An enterprise resource planning system.
21. An enterprise resource planning system has which of the following advantages over multiple independent functional systems?
- A. Modifications can be made to each module without affecting other modules.
 - B. Increased responsiveness and flexibility while aiding in the decision-making process.
 - C. Increased amount of data redundancy since more than one module contains the same information.
 - D. Reduction in costs for implementation and training.
22. What kind data model is most commonly used as a basis for today's enterprise systems?
- A. The hierarchical mode
 - B. The network model
 - C. The relational model
 - D. None of the above
23. The property of the primary key in a table in Microsoft Access should be set to:
- A. The required field = "Yes", the Indexed field = "Yes (No Duplicates)"
 - B. The Required field = "NO" and the Indexed field = "Yes (No Duplicates)"
 - C. The Required field = "Yes" and the Indexed field = "Yes (Duplicated)"
 - D. The Required field = "NO" and the Indexed field = "No (Duplicates)"

24. Which of the following is considered as class in the relational database model?
- A. Customer
 - B. Sale
 - C. Cash
 - D. All of the above are correct
25. Which SAP modules would a manufacturing company use to create a delivery order for a sales transaction?
- A. Materials Management
 - B. Sales and Distribution
 - C. Production Planning and Control
 - D. Logistics Execution
26. Which of the following statements about the requirements of table design is incorrect?
- A. Each attribute in a table must have a unique name.
 - B. Values of a specific attribute must be of the same type.
 - C. Each attribute (column) of a record (row) must be single-valued.
 - D. All other non-key attributes in a table must describe a characteristic of the class (table) identified by the foreign key.
27. To convert a conceptual model with a maximum Multiplicities relationship of "many to many" into relationship database tables, one must
- A. Create a foreign key in one of the tables to link the two tables.
 - B. Create a relation with no attributes of its own.
 - C. Create a relationship table to handle the many-to-many relationship.
 - D. Many-to-many relationship cannot be represented in Access.
28. Which set of multiplicities correctly shows the relationship between the Cash Collection table and the Sales table in modeling cash sales?
- A. Cash Collection (1..1) - Sale (1..N)
 - B. Cash Collection (1..N) - Sale (1..1)
 - C. Cash Collection (1..N) - Sale (1..1)
 - D. Cash Collection (1..1) - Sale (1..1)
29. A Query in a program language can be used to
- A. Update data
 - B. Report data
 - C. Retrieve data
 - D. All of the above

30. In Microsoft Access, we use "Forms" for
- A. Data entry
 - B. Data storage
 - C. Date retrieve
 - D. Two of the above
31. In Microsoft Access, we use "Tables" for:
- A. Data entry
 - B. Data storage
 - C. Date retrieve
 - D. Two of the above
32. Which of the following is not a type of data model?
- A. Hierarchical data model
 - B. Network data model
 - C. Normalization data model
 - D. Relational data model
33. What kind of data models is most commonly used in today's business environment?
- A. Hierarchical data model
 - B. Network data model
 - C. Relational data model
 - D. All of the above
34. Which of the following about cloud computing is incorrect?
- A. Cloud computing is Internet-based computing where shared resources, software, and information are provided to firms on demand.
 - B. Cloud Computing can easily host enterprise system applications.
 - C. One major issue on using cloud computing is about security.
 - D. Clients using cloud computing do not need to periodically backup data.
35. What is the main purpose of using foreign keys in a relational database design?
- A. It provides useful financial data value in the table.
 - B. It is required in all tables.
 - C. It is used to link tables.
 - D. None of the above is correct.

36. Which of the following about SQL is incorrect?
- A. SQL is a language designed to query data in a relational database.
 - B. SQL is based on relational algebra and allows a user to query and update the database.
 - C. SQL is very user-friendly.
 - D. SQL uses SELECT statement to tell the query which columns (or attributes) of a table should be included in the query.
37. Which of the following items can best be described as a "Resource" in the REA data model?
- A. Cashier
 - B. Sales
 - C. Cash
 - D. Two of the above are correct.
38. Which of the following items can best be described as an "Event" in the REA data model?
- A. Cash.
 - B. Cashier.
 - C. Cash collection.
 - D. None of the above is correct.
39. Which of the following items can best be described as an "Agent" in the REA data model?
- A. Purchases.
 - B. Accounts payable clerk.
 - C. Raw material inventory.
 - D. None of the above is correct.
40. Which of the following resources is usually not modeled as an entity (table) in an REA data model?
- A. Cash
 - B. Inventory
 - C. Accounts receivable
 - D. Property, plant and equipment

Essay Questions

41. List the seven objects and their functions that are used to implement relational databases using Microsoft Access.

42. What are the three main advantages of relational databases?

43. Discuss the challenges of enterprise system implementation?

44. Explain the three main types of classes in data modeling.

45. What are the benefits of implementing the enterprise systems in companies?

46. Search for another case on-line in which the company failed to implement the ERP systems. Summarize the case and give the reasons that caused the failure.

47. Using the Cash Receipt Table below, show the output if the following SQL command is given:

Cash Receipt:

Remittance Advice#	Amount	Bank Account#	Date	Customer Number	Cashier Number
RA-1	1,666	BA-6	25-JUL-2014	C-2	E-39
RA-2	10,000	BA-7	26-JUL-2014	C-2	E-39
RA-3	72,000	BA-7	15-AUG-2014	C-1	E-39
RA-4	32,600	BA-7	15-AUG-2014	C-5	E-39
RA-5	1,669	BA-6	25-AUG-2014	C-2	E-39

```
SELECT SUM (Amount)
FROM [cash receipt]
Where [Customer Number] ='C-2'
```

48. Using the Cash Receipt Table in the previous question, show the SQL command which will return the result table below.

Remittance Advice#	Amount	Bank Account#	Date	Customer Number	Cashier Number
RA-3	72,000	BA-7	15-AUG-2014	C-1	E-39
RA-4	32,600	BA-7	15-AUG-2014	C-5	E-39

Chapter 04 Relational Databases and Enterprise Systems **Answer Key**

True / False Questions

1. Three types of data models used today are: the hierarchical model, the network model and the relational model.

TRUE

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 04-01 Describe the advantages of relational databases.
Source: Original
Topic: Introduction*

2. In a hierarchical data model, data elements are related in many-to-many relationships.

FALSE

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-01 Describe the advantages of relational databases.
Source: Original
Topic: Introduction*

3. Classes could be grouped into Resources (R), Entity (E), and Assets (A) in data modeling.

FALSE

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

4. Queries in Access are utilized by users to enter data into tables and view existing records.

FALSE

*AACSB: Technology
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Using Microsoft Access to implement a relational database*

5. The SQL command "Group by" can be used to order an amount in a descending order.

FALSE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original
Topic: Structured Query Language (SQL)

6. The asterisk (*) following the SELECT SQL statement is a wild card indicating all columns should be selected.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original
Topic: Structured Query Language (SQL)

7. The "Where" SQL clause can be used to link two tables.

TRUE

AACSB: Reflective Thinking
AICPA BB: Critical Thinking
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original
Topic: Structured Query Language (SQL)

8. Access offers modules, which are defined by users to automate processes like opening a specific form.

FALSE

AACSB: Technology
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy

Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Using Microsoft Access to implement a relational database

9. In Access, users can edit database information in reports.

FALSE

AACSB: Technology
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-02 Explain basic relational database principles.

Source: Original
Topic: Using Microsoft Access to implement a relational database

10. Cloud computing is an internet-based computing where shared resources, software, and information is provided to firms on demand.

TRUE

AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-05 Assess how cloud computing facilitates enterprise systems.
Source: Original
Topic: Enterprise systems computing in a cloud

11. While hierarchical and network data models require relationships to be formed at the database creation, relational data models can be made up as needed.

TRUE

AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-01 Describe the advantages of relational databases.
Source: Original
Topic: Fundamentals of relational databases

12. Each attribute in a table can have several names.

FALSE

AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium

Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases

13. Access is a simple database management system that can be used to run databases for individuals and small firms.

TRUE

AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy

Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Using Microsoft Access to implement a relational database

14. SQL is based on relational algebra and allows a user to query and update the database.

TRUE

AACSB: Reflective Thinking
AICPA BB: Industry

AICPA FN: Leveraging Technology

Blooms: Remember

Difficulty: 1 Easy

Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).

Source: Original

Topic: Structured Query Language (SQL)

15. In a database, while queries allow the user to access, read and report on desired data, the responsibility of actually making physical changes to the relational database belongs to the Database Management System (DBMS).

TRUE

AACSB: Reflective Thinking

AICPA BB: Industry

AICPA FN: Leveraging Technology

Blooms: Understand

Difficulty: 2 Medium

Learning Objective: 04-02 Explain basic relational database principles.

Source: Original

Topic: Fundamentals of relational databases

Multiple Choice Questions

16. Which type of data models allows each record to have multiple parent and child records?
- A. The hierarchical mode
 - B. The network model**
 - C. The relational model
 - D. None of the above

ANS: B

AACSB: Reflective Thinking

AICPA BB: Industry

AICPA FN: Leveraging Technology

Blooms: Understand

Difficulty: 2 Medium

Learning Objective: 04-01 Describe the advantages of relational databases.

Source: Original

Topic: Introduction

17. Which of the following correctly describes the Referential Integrity Rule?
- A. The primary key of a table must have data values (cannot be null)
 - B. Each attribute in a table must have a unique name
 - C. The data value for a foreign key could be null**
 - D. Values of a specific attribute must be of the same type

ANS: C

AACSB: Reflective Thinking

AICPA BB: Industry

AICPA FN: Leveraging Technology

Blooms: Understand

Difficulty: 2 Medium

Learning Objective: 04-02 Explain basic relational database principles.

Source: Original

Topic: Fundamentals of relational databases

18. Which of the following tasks cannot be performed through queries in access?
- A. Retrieve and display data
 - B. Calculations of data
 - C. Data sorting
 - D. Enter data into tables**

ANS: D

*AACSB: Reflective Thinking
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Using Microsoft Access to implement a relational database*

19. In Microsoft Access, we use tables in a database for:
- A. Data entry
 - B. Data storage**
 - C. Data retrieval
 - D. Two of the above are correct.

ANS: B

*AACSB: Reflective Thinking
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
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20. A company would like to implement a management information system that integrates all functional areas within an organization to allow information exchange and collaboration among all parties involved in business operations. Which of the following systems is most effective for this application?
- A. A decision support system.
 - B. An executive support system.
 - C. An office automation system.
 - D. An enterprise resource planning system.**

ANS: D

*AACSB: Analytic
AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.
Source: CPA examination 2012
Topic: Enterprise systems*

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21. An enterprise resource planning system has which of the following advantages over multiple independent functional systems?
- A. Modifications can be made to each module without affecting other modules.
 - B. Increased responsiveness and flexibility while aiding in the decision-making process.**
 - C. Increased amount of data redundancy since more than one module contains the same information.
 - D. Reduction in costs for implementation and training.

AACSB: Analytic

ANS: B

*AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.
Source: CPA examination 2010
Topic: Enterprise systems*

22. What kind data model is most commonly used as a basis for today's enterprise systems?
- A. The hierarchical mode
 - B. The network model
 - C. The relational model**
 - D. None of the above

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-01 Describe the advantages of relational databases.
Source: Original
Topic: Introduction*

23. The property of the primary key in a table in Microsoft Access should be set to:
- A. The required field = "Yes", the Indexed field = "Yes (No Duplicates)"**
 - B. The Required field = "NO" and the Indexed field = "Yes (No Duplicates)"
 - C. The Required field = "Yes" and the Indexed field = "Yes (Duplicated)"
 - D. The Required field = "NO" and the Indexed field = "No (Duplicates)"

ANS: A

*AACSB: Technology
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Using Microsoft Access to implement a relational database*

24. Which of the following is considered as class in the relational database model?

- A. Customer
- B. Sale
- C. Cash
- D. All of the above are correct**

ANS: D

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

25. Which SAP modules would a manufacturing company use to create a delivery order for a sales transaction?

- A. Materials Management
- B. Sales and Distribution**
- C. Production Planning and Control
- D. Logistics Execution

ANS: B

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.
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26. Which of the following statements about the requirements of table design is incorrect?

- A. Each attribute in a table must have a unique name.
- B. Values of a specific attribute must be of the same type.
- C. Each attribute (column) of a record (row) must be single-valued.
- D. All other non-key attributes in a table must describe a characteristic of the class (table) identified by the foreign key.**

ANS: D

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

27. To convert a conceptual model with a maximum Multiplicities relationship of "many to many" into relationship database tables, one must

- A. Create a foreign key in one of the tables to link the two tables.
- B. Create a relation with no attributes of its own.
- C. Create a relationship table to handle the many-to-many relationship.**
- D. Many-to-many relationship cannot be represented in Access.

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original*

Topic: Fundamentals of relational databases

28. Which set of multiplicities correctly shows the relationship between the Cash Collection table and the Sales table in modeling cash sales?

- A. Cash Collection (1..1) - Sale (1..N)
- B. Cash Collection (1..N) - Sale (1..1)
- C. Cash Collection (1..N) - Sale (1..1)
- D. Cash Collection (1..1) - Sale (1..1)**

ANS: D

*AACSB: Analytic
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Apply
Difficulty: 3 Hard*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original*

Topic: Fundamentals of relational databases

29. A Query in a program language can be used to

- A. Update data
- B. Report data
- C. Retrieve data
- D. All of the above**

ANS: D

AACSB: Reflective Thinking

*AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

*Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original*

Topic: Structured Query Language (SQL)

30. In Microsoft Access, we use "Forms" for

- A. Data entry
- B. Data storage
- C. Date retrieve
- D. Two of the above

ANS: A

*AACSB: Technology
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

Learning Objective: 04-02 Explain basic relational database principles.

Source: Original

Topic: Using Microsoft Access to implement a relational database

31. In Microsoft Access, we use "Tables" for:

- A. Data entry
- B. Data storage**
- C. Date retrieve
- D. Two of the above

ANS: B

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Apply
Difficulty: 3 Hard*

Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.

Source: Original

Topic: Enterprise systems

32. Which of the following is not a type of data model?

- A. Hierarchical data model
- B. Network data model
- C. Normalization data model**
- D. Relational data model

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

Learning Objective: 04-01 Describe the advantages of relational databases.

Source: Original

Topic: Introduction

33. What kind of data models is most commonly used in today's business environment?

- A. Hierarchical data model
- B. Network data model
- C. Relational data model**
- D. All of the above

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 04-01 Describe the advantages of relational databases.
Source: Original
Topic: Introduction*

34. Which of the following about cloud computing is incorrect?

- A. Cloud computing is Internet-based computing where shared resources, software, and information are provided to firms on demand.
- B. Cloud Computing can easily host enterprise system applications.
- C. One major issue on using cloud computing is about security.
- D. Clients using cloud computing do not need to periodically backup data.**

ANS: D

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-05 Assess how cloud computing facilitates enterprise systems.
Source: Original
Topic: Enterprise systems*

35. What is the main purpose of using foreign keys in a relational database design?

- A. It provides useful financial data value in the table.
- B. It is required in all tables.
- C. It is used to link tables.**
- D. None of the above is correct.

ANS: C

*AACSB: Analytic
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

36. Which of the following about SQL is incorrect?
- A. SQL is a language designed to query data in a relational database.
 - B. SQL is based on relational algebra and allows a user to query and update the database.
 - C. SQL is very user-friendly.**
 - D. SQL uses SELECT statement to tell the query which columns (or attributes) of a table should be included in the query.

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original
Topic: Structured Query Language (SQL)*

37. Which of the following items can best be described as a "Resource" in the REA data model?
- A. Cashier
 - B. Sales
 - C. Cash**
 - D. Two of the above are correct.

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

38. Which of the following items can best be described as an "Event" in the REA data model?
- A. Cash.
 - B. Cashier.
 - C. Cash collection.**
 - D. None of the above is correct.

ANS: C

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium
Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

39. Which of the following items can best be described as an "Agent" in the REA data model?
- A. Purchases.
 - B. Accounts payable clerk.**
 - C. Raw material inventory.
 - D. None of the above is correct.

ANS: B

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

40. Which of the following resources is usually not modeled as an entity (table) in an REA data model?
- A. Cash
 - B. Inventory
 - C. Accounts receivable**
 - D. Property, plant and equipment

ANS: C

AACSB: Reflective Thinking

*AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Apply
Difficulty: 3 Hard*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original
Topic: Fundamentals of relational databases*

Essay Questions

41. List the seven objects and their functions that are used to implement relational databases using Microsoft Access.

- Tables are used to store data.
- Queries are a tool used to retrieve and display data derived from records stored within the database.
- Forms are utilized to enter data into tables and view existing records.
- Reports are used to integrate data from one or more queries and tables to provide useful information to decision makers.
- Pages allow data to be entered into the database in real time from outside of the database system.
- Macros are defined by users to automate business processes.

*AACSB: Reflective Thinking
AICPA BB: Leveraging Technology
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

Learning Objective: 04-02 Explain basic relational database principles.

Source: Original

Topic: Using Microsoft Access to implement a relational database

42. What are the three main advantages of relational databases?

- Flexibility and Scalability: relational data models are able to handle changes in business world quickly and easily.
- Simplicity: A relational data model is a relatively simple model that is easy to communicate to both database users and database developers.
- Reduced Information Redundancy: A relational data model requires each piece of data to be recorded only in one place eliminating the need for information to be stored in multiple places in the organization.

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Remember
Difficulty: 1 Easy*

Learning Objective: 04-01 Describe the advantages of relational databases.

Source: Original

Topic: Introduction

43. Discuss the challenges of enterprise system implementation?

- Integrating various modules within the enterprise system,
- Integrating with external systems such as the information system of a supplier and/or customer,
- Integrating with the firm's own existing legacy systems,
- Converting data from existing legacy systems to the enterprise system, and
- Getting any big project implemented at a firm.

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Understand
Difficulty: 2 Medium
Source: Original
Topic: Enterprise systems*

Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.

44. Explain the three main types of classes in data modeling.

- Resources (R), events (E), and agents (A).
- Resources are those things that have economic value to a firm, such as cash and products.
- Events are the various business activities conducted in a firm's daily operations, such as sales and purchases.
- Agents are the people who participate in business events, such as customers and salespeople.

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Understand
Difficulty: 2 Medium*

*Learning Objective: 04-02 Explain basic relational database principles.
Source: Original*

Topic: Fundamentals of relational databases

45. What are the benefits of implementing the enterprise systems in companies?

Managers (and auditors) can trace the creation of information throughout business processes, and also identify the participants in each process. Therefore, ES has a higher level of internal transparency compared to the typically isolated legacy systems.

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Decision Making*

Blooms: Remember
Difficulty: 1 Easy
Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.
Source: Original
Topic: Enterprise systems

- 46 Search for another case on-line in which the company failed to implement the ERP systems.
· Summarize the case and give the reasons that caused the failure.

Following is an example. Students' answer may vary.

A case in which a company failed to implement the ERP systems is Nike's supply chain disaster (http://www.cio.com/article/32334/Nike_Rebounds_How_and_Why_Nike_Recovered_from_Its_Supply_Chain_Disaster).

In this occurrence, Nike had a problem which is now referred to as 'the i2 problem' in which a software glitch cost Nike over \$100 million in lost sales. Furthermore, Nike's stock price was depressed by 20 percent and many class action lawsuits followed. In the year 2000, Nike implemented an i2 demand-planning engine which computed orders for thousands more Air Garnett sneakers than market demand and computed orders for thousands fewer Air Jordan's than market demand.

One of the main reasons that caused the failure and why Nike could recover was that Nike had a business plan which was widely understood. The software problem, which was related to factory orders in Nike's case, sends a ripple through the product delivery which results into a much larger effect that eventually crashes on the balance sheet. In the end, this effect was so large that Nike had to reveal its losses at analysts in order to prevent confusion from the end of SEC and its shareholders.

Nike ended up stopping the use of the i2 demand planner in favor of using the SAP ERP system, which relies on orders and invoices rather than what the i2 relied on, which was predictive algorithms. Nike had been attempting to integrate the i2 demand planning software as part of a wider strategy to implement ERP, supply chain planning, and CRM software onto a single platform shared by Nike operations in areas all over the world.

The reason that the i2 problem emerged was that Nike decided to install i2 while still using its legacy systems rather than adhering to their original plan which was to deploy i2 as part of its SAP ERP project. This caused some problems, such as the problem of heavy customization of i2 software with Nike's legacy systems. This spilled over into factory orders, in which the i2 system duplicated some orders and ignored other orders.

Nike had felt a false sense of security when they decided to install i2 due to the fact that it was a much smaller project when compared to the SAP plan. They felt that they could use i2 without changing much of the other business software, but they were incorrect in regards to integration complications. Essentially, the installation of the i2 software was too rushed, and there was not enough training for the employees.

AACSB: Analytic
AICPA BB: Industry
AICPA FN: Decision Making
Blooms: Apply
Difficulty: 3 Hard
Learning Objective: 04-04 Understand the purpose and basic framework for an enterprise system.
Source: Original
Topic: Enterprise systems

47. Using the Cash Receipt Table below, show the output if the following SQL command is given: Cash Receipt:

Remittance Advice#	Amount	Bank Account#	Date	Customer Number	Cashier Number
RA-1	1,666	BA-6	25-JUL-2014	C-2	E-39
RA-2	10,000	BA-7	26-JUL-2014	C-2	E-39
RA-3	72,000	BA-7	15-AUG-2014	C-1	E-39
RA-4	32,600	BA-7	15-AUG-2014	C-5	E-39
RA-5	1,669	BA-6	25-AUG-2014	C-2	E-39

```
SELECT SUM (Amount)
FROM [cash receipt]
Where [Customer Number] ='C-2'
```

13,335

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Apply
Difficulty: 3 Hard
Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).
Source: Original
Topic: Structured Query Language (SQL)*

48. Using the Cash Receipt Table in the previous question, show the SQL command which will return the result table below.

Remittance Advice#	Amount	Bank Account#	Date	Customer Number	Cashier Number
RA-3	72,000	BA-7	15-AUG-2014	C-1	E-39
RA-4	32,600	BA-7	15-AUG-2014	C-5	E-39

```
SELECT *
FROM [Cash Receipt]
WHERE Date = '15-AUG-2014'
```

*AACSB: Reflective Thinking
AICPA BB: Industry
AICPA FN: Leveraging Technology
Blooms: Apply
Difficulty: 3 Hard
Learning Objective: 04-03 Describe how to query using Structured Query Language (SQL).*