

Chapter 1: Introduction to Database Management

True / False

1. Redundancy wastes space because you are storing different types of data in the same place.

- a. True
- b. False

ANSWER: False

POINTS: 1

REFERENCES: 2

2. When you need to change data, redundancy makes your changes more cumbersome and time-consuming.

- a. True
- b. False

ANSWER: True

POINTS: 1

REFERENCES: 2

3. An entity is also defined as an attribute.

- a. True
- b. False

ANSWER: False

POINTS: 1

REFERENCES: 5

4. An attribute is a characteristic or property of an entity.

- a. True
- b. False

ANSWER: True

POINTS: 1

REFERENCES: 5

5. An attribute is known as a row in most databases.

- a. True
- b. False

ANSWER: False

POINTS: 1

REFERENCES: 5

6. A database will not only hold information about multiple types of entities, but also information about the relationships among these multiple entities.

- a. True
- b. False

ANSWER: True

POINTS: 1

REFERENCES: 5

7. Each table in a database represents two or more entities.

Chapter 1: Introduction to Database Management

- a. True
- b. False

ANSWER: False
POINTS: 1
REFERENCES: 6

8. The relationship between different entities (in different tables) is handled by their common columns.

- a. True
- b. False

ANSWER: True
POINTS: 1
REFERENCES: 6

9. Software packages, called database management systems, can do the job of manipulating databases for you.

- a. True
- b. False

ANSWER: True
POINTS: 1
REFERENCES: 10

10. Programs created with Visual Basic, Java, Perl, PHP, or C++ can access the database directly, rather than having to access it through the DBMS.

- a. True
- b. False

ANSWER: False
POINTS: 1
REFERENCES: 11

11. To create forms to use with a database you must write a program.

- a. True
- b. False

ANSWER: False
POINTS: 1
REFERENCES: 11

12. Sharing data is one advantage of database processing.

- a. True
- b. False

ANSWER: True
POINTS: 1
REFERENCES: 13

13. An advantage of using the database approach to processing is that it facilitates consistency.

- a. True
- b. False

Chapter 1: Introduction to Database Management

ANSWER: True
POINTS: 1
REFERENCES: 13

14. A DBA can assign passwords to prevent unauthorized users from accessing the data.

- a. True
- b. False

ANSWER: True
POINTS: 1
REFERENCES: 15

15. There is a greater impact of failure in a nondatabase, file-oriented system.

- a. True
- b. False

ANSWER: False
POINTS: 1
REFERENCES: 16

Multiple Choice

16. Storing the same data in more than one place is called ____.

- a. data independence
- b. redundancy
- c. data integrity
- d. security

ANSWER: b
POINTS: 1
REFERENCES: 2

17. A(n) ____ is also called a field or column in many database systems.

- a. attribute
- b. entity
- c. data file
- d. relationship

ANSWER: a
POINTS: 1
REFERENCES: 5

18. A(n) ____ is a person, place, object, event, or idea for which you want to store and process data.

- a. attribute
- b. DBMS
- c. entity
- d. DBA

ANSWER: c
POINTS: 1

Chapter 1: Introduction to Database Management

REFERENCES:

5

19. A(n) ____ is the computer counterpart to an ordinary paper file you might keep in a file cabinet or an accounting ledger.

- a. database
- b. spreadsheet
- c. data file
- d. attribute

ANSWER:

c

POINTS:

1

REFERENCES:

6

20. The ____ of an entity become the columns in the database table.

- a. attributes
- b. tuples
- c. data files
- d. E-R diagrams

ANSWER:

a

POINTS:

1

REFERENCES:

6

21. Unlike a typical data file, a database can store information about multiple ____.

- a. attributes
- b. bytes
- c. entities
- d. characters

ANSWER:

c

POINTS:

1

REFERENCES:

6

22. A visual way to represent a database is with a(n) ____.

- a. spreadsheet
- b. DBMS
- c. entity-relationship diagram
- d. DBA

ANSWER:

c

POINTS:

1

REFERENCES:

10

23. Popular ____ include Access, Oracle, DB2, MySQL, and SQL Server.

- a. E-R diagrams
- b. DBAs
- c. data files
- d. DBMSs

ANSWER:

d

Chapter 1: Introduction to Database Management

POINTS: 1
REFERENCES: 11

24. During the ____ process, a database expert determines the structure of the required database.
- a. data security
 - b. database integrity
 - c. database design
 - d. database selection

ANSWER: c

POINTS: 1

REFERENCES: 11

25. ____ are screen objects used to maintain, view, and print data from a database.
- a. Fields
 - b. Forms
 - c. Data files
 - d. Entities

ANSWER: b

POINTS: 1

REFERENCES: 11

26. Which of the following statements is correct?
- a. In a nondatabase, file-oriented environment, data is often partitioned into several disjointed systems with each system having its own collection of files.
 - b. User data cannot be combined and shared among authorized users.
 - c. Database users should not have access to the same information.
 - d. The elimination of redundancy is always possible.

ANSWER: a

POINTS: 1

REFERENCES: 13

27. An integrity constraint is a rule that ____.
- a. is kept in an external file
 - b. data must follow in the database
 - c. can be accessed only by authorized users
 - d. can unintentionally be accessed by unauthorized users

ANSWER: b

POINTS: 1

REFERENCES: 14

28. A database has ____ if the data in it satisfies all established integrity constraints.
- a. redundancy
 - b. integrity
 - c. data independence
 - d. database design

Chapter 1: Introduction to Database Management

ANSWER: b
POINTS: 1
REFERENCES: 14

29. ____ is the prevention of unauthorized access to the database.

- a. Data independence
- b. Integrity constraint
- c. Redundancy
- d. Security

ANSWER: d
POINTS: 1
REFERENCES: 15

30. A(n) ____ frees programmers who write database access programs from having to engage in mundane data manipulation activities, such as adding new data and deleting existing data.

- a. E-R diagram
- b. DBA
- c. entity
- d. DBMS

ANSWER: d
POINTS: 1
REFERENCES: 15

31. A person who is in charge of a database within an organization is often called the database ____.

- a. writer
- b. designer
- c. administrator
- d. controller

ANSWER: c
POINTS: 1
REFERENCES: 14

32. A good ____ should provide an opportunity for users to incorporate integrity constraints when they design the database.

- a. database administrator
- b. DBA
- c. E-R diagram
- d. DBMS

ANSWER: d
POINTS: 1
REFERENCES: 14

33. A DBMS lets you assign users to ____.

- a. groups
- b. classes

Chapter 1: Introduction to Database Management

- c. attributes
- d. clusters

ANSWER: a
POINTS: 1
REFERENCES: 15

34. ____ is a property that lets you change the structure of the database without requiring you to change the programs that access the database.

- a. Database design
- b. Data independence
- c. Integrity constraint
- d. Data dependence

ANSWER: b
POINTS: 1
REFERENCES: 15

35. One disadvantage of a database system is ____.

- a. a larger file size
- b. data dependence
- c. reduced integrity
- d. reduced productivity

ANSWER: a
POINTS: 1
REFERENCES: 15

Completion

36. In a(n) _____ relationship between two entities, each occurrence of the first entity is related to many occurrences of the second entity and each occurrence of the second entity is related to only one occurrence of the first entity.

ANSWER: one-to-many
one to many

POINTS: 1
REFERENCES: 25

37. A program, or collection of programs, through which users interact with a database is known as a(n) _____.

ANSWER: DBMS
database management system
database management system (DBMS)
DBMS (database management system)

POINTS: 1
REFERENCES: 10

38. In an E-R diagram, _____ represent entities.

ANSWER: rectangles

Chapter 1: Introduction to Database Management

POINTS: 1
REFERENCES: 10

39. In an E-R diagram, _____ represent relationships between connected entities.

ANSWER: lines

POINTS: 1

REFERENCES: 10

40. In an E-R diagram, the _____ at the end of a line indicates the “many” part of the one-to-many relationship between two entities.

ANSWER: dot

POINTS: 1

REFERENCES: 10

41. A group of people in charge of a database within an organization is often called the _____.

ANSWER: DBA
database administration
database administration (DBA)
DBA (database administration)

POINTS: 1

REFERENCES: 14

42. The problem of inconsistency in data is a direct result of _____.

ANSWER: redundancy

POINTS: 1

REFERENCES: 14

43. Eliminating _____ not only saves space but also makes the process of updating data much simpler.

ANSWER: redundancy

POINTS: 1

REFERENCES: 14

44. A good _____ has many features that allow users to gain access to data in a database without having to do any programming.

ANSWER: DBMS
database management system
database management system (DBMS)
DBMS (database management system)

POINTS: 1

REFERENCES: 15

45. A database file requires a large amount of disk space and internal _____.

ANSWER: memory

POINTS: 1

REFERENCES: 15

Chapter 1: Introduction to Database Management

Essay

46. List the advantages of database processing.

ANSWER: Getting more information from the same amount of data
 Sharing data
 Balancing conflicting requirements
 Controlling redundancy
 Facilitating consistency
 Improving integrity
 Expanding security
 Increasing productivity
 Providing data independence

POINTS: 1

REFERENCES: 13

47. Explain why it is better to try to control redundancy rather than eliminate it.

ANSWER: Although eliminating redundancy is the ideal, it is not always possible. Sometimes, for reasons having to do with performance, you might choose to introduce a limited amount of redundancy into a database. However, even in these cases, you would be able to keep the redundancy under tight control, thus obtaining the same advantages. This is why it is better to say that you control redundancy rather than eliminate it.

POINTS: 1

REFERENCES: 14

48. Discuss how the database approach and the nondatabase approach differ in terms of ensuring the security of the database.

ANSWER: A DBMS has many features that help ensure the enforcement of security measures. For example, a DBA can assign passwords to authorized users; then only those users who enter an acceptable password can gain access to the data in the database. Further, a DBMS lets you assign users to groups, with some groups permitted to view and update data in the database and other groups permitted only to view certain data in the database. With the nondatabase approach, you have limited security features and are more vulnerable to intentional and accidental access and changes to data.

POINTS: 1

REFERENCES: 15

49. List the disadvantages of database processing.

ANSWER: Larger file size
 Increased complexity
 Greater impact of failure
 More difficult recovery

POINTS: 1

REFERENCES: 15

50. Explain why the impact of failure is greater in database processing, compared with the nondatabase approach.

ANSWER: In a nondatabase, file-oriented system, each user has a completely separate system; the failure

Chapter 1: Introduction to Database Management

of any single user's system does not necessarily affect any other user. On the other hand, if several users are sharing the same database, a failure on the part of any one user that damages the database in some way might affect all the other users.

POINTS: 1

REFERENCES: 16