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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. Redundancy wastes space because you are storing multiple copies of the same data.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | BITS Company Background |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 2. Redundancy makes changing data more cumbersome and time-consuming.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

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| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | BITS Company Background |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3. An entity is a person, place, object, event, or idea for which you want to store and process data.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Terminology |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 4. A client is an example of an attribute.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Terminology |

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

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Terminology |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 9. Users never interact with a database directly; database interaction is always through the DBMS.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 10. Programs created with Visual Basic, Java, Perl, PHP, or C++ can interact with the database directly.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 11. A spreadsheet is a screen object used to maintain and view data from a database.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 12. Increased complexity is one advantage of database processing.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | True |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 14. If a user is authorized to access database data, the user will always be able to make changes to the data.

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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

|  |  |  |
| --- | --- | --- |
|   | a.  | True |
|   | b.  | False |

|  |  |
| --- | --- |
| *ANSWER:* | False |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Disadvantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 16. Which term can be described as the duplication of data and storing it in multiple locations?

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

|  |  |
| --- | --- |
| *ANSWER:* | b |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | BITS Company Background |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17. Which of the following is called a field or column in many database systems?

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

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Terminology |

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| 18. Which database term 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 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Terminology |

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| 19. In database terms, what is the analogy 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 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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| 20. Which aspect of an entity becomes the columns in the database table?

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

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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| 21. How are multiple entities stored in a database?

|  |  |  |
| --- | --- | --- |
|   | a.  | each entity is stored as a row |
|   | b.  | each entity is stored as an attribute |
|   | c.  | each entity is stored as a table |
|   | d.  | each entity is stored as a column |

|  |  |
| --- | --- |
| *ANSWER:* | c |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 22. What tool can you use to visually represent and analyze a database?

|  |  |  |
| --- | --- | --- |
|   | a.  | multi-sheet workbook |
|   | b.  | DBMS table identifier |
|   | c.  | entity-relationship diagram |
|   | d.  | DBA column analyzer |

|  |  |
| --- | --- |
| *ANSWER:* | c |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Storing Data |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23. What type of software programs are Access, Oracle, DB2, MySQL, and SQL Server?

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

|  |  |
| --- | --- |
| *ANSWER:* | d |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 24. During which process does a database expert determine the structure of the required database?

|  |  |  |
| --- | --- | --- |
|   | a.  | data security |
|   | b.  | database integrity |
|   | c.  | database design |
|   | d.  | database selection |

|  |  |
| --- | --- |
| *ANSWER:* | c |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25. Which of the following 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 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Management Systems |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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.  | Controlling redundancy is easier with the nondatabase approach. |

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 27. Which type of rule ensures that changes made to the database do not result in a loss of data consistency?

|  |  |  |
| --- | --- | --- |
|   | a.  | redundancy constraint |
|   | b.  | integrity constraint |
|   | c.  | conflict requirement |
|   | d.  | security requirement |

|  |  |
| --- | --- |
| *ANSWER:* | b |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| 28. How does the use of a database facilitate data consistency?

|  |  |  |
| --- | --- | --- |
|   | a.  | by controlling redundancy |
|   | b.  | by reducing security |
|   | c.  | by eliminating integrity constraints |
|   | d.  | by providing data independence |

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 29. Which advantage of database processing makes it easier to make a change in the database structure?

|  |  |  |
| --- | --- | --- |
|   | a.  | data independence |
|   | b.  | integrity constraints |
|   | c.  | redundancy control |
|   | d.  | security controls |

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 30. Which advantage of using a DBMS 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.  | controlling redundancy |
|   | b.  | referential integrity |
|   | c.  | data independence |
|   | d.  | increased productivity |

|  |  |
| --- | --- |
| *ANSWER:* | d |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 31. Which factor can mitigate the problems of increased complexity that come with using a DBMS?

|  |  |  |
| --- | --- | --- |
|   | a.  | writing complex access rules |
|   | b.  | using large file sizes |
|   | c.  | sound database design |
|   | d.  | using no integrity constraints |

|  |  |
| --- | --- |
| *ANSWER:* | c |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Disadvantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 32. Which of the following is true about big data?

|  |  |  |
| --- | --- | --- |
|   | a.  | unstructured big data doesn't contain metadata |
|   | b.  | a Twitter tweet is an example of structured big data |
|   | c.  | all big data can be handled with traditional DBMS tools |
|   | d.  | big data may be structured or unstructured |

|  |  |
| --- | --- |
| *ANSWER:* | d |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Big Data |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 33. What should an administrator use to more easily assign database access permissions to multiple users?

|  |  |  |
| --- | --- | --- |
|   | a.  | groups |
|   | b.  | classes |
|   | c.  | attributes |
|   | d.  | clusters |

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 34. Which database property 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 |
| *DIFFICULTY:* | Difficult |
| *REFERENCES:* | Advantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35. Which of the following is considered a disadvantage of a database system?

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

|  |  |
| --- | --- |
| *ANSWER:* | a |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Disadvantages of Database Processing |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 36. In a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ relationship between two entities, an entity is associated with multiple other entities such as when a consultant is associated with multiple clients.

|  |  |
| --- | --- |
| *ANSWER:* | one-to-many |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Database Terminology |

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| 37. A program, or collection of programs, through which users interact with a database is known as a(n)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ management system.

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| *ANSWER:* | database |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Database Management Systems |

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| 38. In an E-R diagram rectangles represent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| *ANSWER:* | entities |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Storing Data |

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| 39. In an E-R diagram, lines represent \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between connected entities.

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| *ANSWER:* | relationships |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Storing Data |

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| 40. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ describes the large volume of data produced by every digital process, system, sensor, mobile device, and even social media exchange.

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| *ANSWER:* | Big data |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Big Data |

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| 41. A good DBMS provides data \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, which is a property that lets you change the structure of a database without requiring you to change the programs that access the database.

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| *ANSWER:* | independence |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| 42. The problem of inconsistency in data is a direct result of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| *ANSWER:* | redundancy |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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| 43. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ integrity is a relational database concept stating that table relationships must be consistent and follow integrity constraints.

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| *ANSWER:* | Referential |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Advantages of Database Processing |

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| 44. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ data is not organized or easily interpreted by traditional databases or data models.

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| *ANSWER:* | Unstructured |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Big Data |

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| 45. A database file requires a large amount of disk space and internal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| *ANSWER:* | memory |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Easy |
| *REFERENCES:* | Advantages of Database Processing |

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| 46. List the advantages of database processing.

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| *ANSWER:* | Getting more information from the same amount of dataSharing dataBalancing conflicting requirementsControlling redundancyFacilitating consistencyImproving integrityExpanding securityIncreasing productivityProviding data independence |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Difficult |
| *REFERENCES:* | Advantages of Database Processing |

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

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| *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 |
| *DIFFICULTY:* | Difficult |
| *REFERENCES:* | Advantages of Database Processing |

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

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| *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 |
| *DIFFICULTY:* | Difficult |
| *REFERENCES:* | Advantages of Database Processing |

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| 49. List the disadvantages of database processing.

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| *ANSWER:* | Larger file sizeIncreased complexityGreater impact of failureMore difficult recovery |
| *POINTS:* | 1 |
| *DIFFICULTY:* | Moderate |
| *REFERENCES:* | Disadvantages of Database Processing |

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

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| *ANSWER:* | In a nondatabase, file-oriented system, each user has a completely separate system; the failure 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 |
| *DIFFICULTY:* | Difficult |
| *REFERENCES:* | Disadvantages of Database Processing |

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