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CS5340 Databases – Fall 2025 (Quiz # 0)

Name: _____

Roll No: _____

Instructions

- 1- Read the Questions carefully to give concise Answers.
- 2- Answers outside the box will not be considered. Answers should be readable
- 3- Clearly mention any assumptions you have taken in your Answers.
- 4- Use of unfair means will result in an award of ZERO marks.

Q1. Which of the following is a unique feature of asymmetric encryption compared to symmetric encryption?

- | | |
|---|--|
| A. It uses a single secret key for both encryption and decryption. | B. It does not requires secret keys. |
| C. It uses a mathematically linked pair of keys (public & private) where one key encrypts and only the other can decrypt. | D. It is generally faster and more efficient for bulk data encryption. |

Explain your answer:

Q2. Which of the following is a real-life use of databases in healthcare?

- | | |
|--------------------------------|--|
| A. Recording songs on CDs | B. Patient records, prescriptions, and lab results |
| C. Filing handwritten receipts | D. Organizing physical X-ray films |

Explain your answer:

Q3. Which of the following is an example of semi-structured data?

- | | |
|---|--|
| A. Employee records stored in an SQL table (Name, ID, Salary) | B. A folder of customer support chat screenshots |
| C. A JSON file containing user profile information | D. A printed report of monthly sales figures |

Explain your answer:

Q4. Which is an example of structured data?

- | | |
|---|----------------------------------|
| A. Employee table with ID, Name, and Salary | B. A folder of holiday pictures |
| C. Chat messages in WhatsApp | D. Customer reviews in free text |

Explain your answer:

Q5. Why were flat files of the 1960s considered highly inefficient?

- A. They supported relationships but lacked indexing.
- B. They stored data in binary instead of text, making them unreadable.
- C. A change in one file often required manual updates in multiple related files.
- D. They required SQL to query, which slowed down retrieval.

Explain your answer:

Q6. Which of the following is NOT a typical use case for NoSQL databases?

- A. Real-time analytics
- B. Chat applications
- C. Content feeds
- D. Traditional relational accounting systems

Explain your answer:

Q7. Which of the following best defines data?

- A. Processed information ready for decisions
- B. Raw facts and figures without context
- C. A collection of insights and reports
- D. Organized tables in a DBMS

Explain your answer:

Q8. Which feature ensures the same records are visible to all users accessing a database?

- A. Encryption
- B. Data Integrity
- C. Indexing
- D. Cloud Hosting

Explain your answer:

Q9. Which type of data does not follow a fixed format or structure?

- A. Structured data
- B. Semi-structured data
- C. Unstructured data
- D. Tabular data

Explain your answer:

Q10. Which of the following best explains why social media platforms like Facebook and TikTok need databases?

- A. To store only login credentials
- B. To store and analyze user content, interactions, and recommendations
- C. To reduce internet bandwidth usage
- D. To prevent users from deleting posts

Explain your answer:

Q11. Why do organizations value data?

- A. To reduce network speed
- B. To track performance, predict trends, and make smart decisions
- C. To remove the need for employees
- D. To replace hardware systems

Explain your answer:

Q12. Which of the following best illustrates the difference between data and information in the context of databases?

- A. 102, 105, 110 are marks of students and is data; calculating the class average as 105.6 is information.
- B. A sales report showing profit margins is data, while the raw receipts are information.
- C. A table of employee names is information, while identifying their manager is data.
- D. The JSON file of an online purchase is information, while the analysis of customer spending patterns is data.

Explain your answer:

Q13. Which is an example of unstructured data?

- A. An SQL query log
- B. XML document
- C. A set of family photos
- D. Excel attendance sheet

Explain your answer:

Q14. Which of the following best explains how databases improved exam record-keeping compared to paper-based systems?

- A. They reduced the number of subjects students could take.
- B. They allowed duplicate roll numbers to be assigned for flexibility.
- C. They enabled fast searching, eliminated redundancy, and improved security
- D. They replaced teachers with automated grading systems

Explain your answer:

Q15. Which of the following is a major challenge of symmetric key encryption?

- A. It requires significantly more computational power than asymmetric key encryption
- B. Secure key distribution between communicating parties
- C. Managing a large number of keys in a network
- D. Keys automatically expire after each use

Explain your answer:

Q16. why is port 1433 important for Microsoft SQL Server?

- A. It is the default port used by SQL Server for broadcasting messages
- B. It is the default port SQL Server listens on for incoming client connections
- C. It is a random port assigned to SQL Server during installation
- D. It is used by web servers to handle HTTP requests

Explain your answer:

Q17. Which leadership role oversees all data activities, policies, and governance?

- A. Database Administrator
- B. Data Analyst
- C. Chief Data Officer (CDO)
- D. Database Architect

Explain your answer:

Q18. Why is sharing exam data easier with databases?

- A. Data must be shipped physically
- B. Data can be instantly accessed online from anywhere
- C. Multiple duplicate copies are made
- D. Examiners exchange CDs or USBs

Explain your answer:

Q19. Which of the following best describes a database?

- A. A file system for saving documents only
- B. An organized collection of data stored electronically for efficient access and management
- C. A programming language for queries
- D. A computer hardware device for storage

Explain your answer:

Q20. Which problem was solved by introducing databases in exam systems?

- A. Risk of paper damage during shipping
- B. Needing more warehouses
- C. Too many authorized users
- D. High cost of encryption

Explain your answer: