Important Questions - Database Management System (NCS4401)

(Only Module 6 was visible above in full. For full PDF export, ideally we'd include all modules, but here we'll demonstrate exporting the visible Module 6 content.)

Module 6: Advanced Topics and Emerging Trends

Q36: What is distributed database system?

English: A distributed database system is a database spread across multiple locations but appears as a single database to users.

Highlish: Distributed database system matlab database jo alag-alag jagah pe hai, par user ko ek hi lagta hai.

Q37: Explain the types of distributed databases.

English:

- Homogeneous: Same DBMS at all sites
- Heterogeneous: Different DBMS at different sites

Highlish:

- Homogeneous: Sab jagah same DBMS
- Heterogeneous: Alag-alag DBMS use kiya gaya hai

Q38: What is data fragmentation?

English: Dividing a database into smaller parts for storage across multiple sites.

Highlish: Database ko chhote parts me todna - fragments banake alag-alag jagah store karna.

Q39: What is data replication?

English: Storing copies of data at multiple sites to ensure availability and reliability.

Highlish: Data ki multiple copies alag-alag jagah store karna - taaki system reliable ho.

Q40: What are the challenges in distributed databases?

English:

- Network failure

- Data consistency

- Complex query processing

Highlish:

- Network kharab ho sakta hai

- Data sab jagah same rakhna mushkil

- Queries ko handle karna tough ho jata hai

Q41: What is data warehouse?

English: A data warehouse is a central repository that stores integrated data from multiple sources for analysis and reporting.

Highlish: Data warehouse ek aisi jagah hai jahan kai sources ka data ikattha karke analysis ke liye store kiya jata hai.

Q42: What is data mining?

English: Data mining is the process of discovering patterns and knowledge from large amounts of data.

Highlish: Data mining matlab bade data me se important patterns aur information dhoondhna.

Q43: What are OLTP and OLAP?

English:

- OLTP: Online Transaction Processing (fast insert/update/delete)

- OLAP: Online Analytical Processing (complex queries and analysis)

Highlish:

- OLTP: Jaldi se transaction ka kaam karne wala system

- OLAP: Data analysis aur reporting ke liye use hota hai

Q44: Difference between DBMS and Data Warehouse?

English:

- DBMS: Day-to-day operations, real-time data

- Data Warehouse: Historical data, used for analysis

Highlish:

- DBMS: Roz ka kaam karta hai

- Data Warehouse: Purana data analysis ke liye rakhta hai

Q45: What is NoSQL? Where is it used?

English: NoSQL refers to non-relational databases used for big data, real-time web apps.

Highlish: NoSQL matlab relational database ke alawa aur tarike jahan schema fix nahi hota - big data ke liye useful hai.

Q46: Types of NoSQL databases?

English:

- Document-based

- Key-Value

- Column-based

- Graph-based

Highlish:

- Document store

- Key-value store

- Column store

- Graph database

Q47: Explain CAP theorem.

English: CAP = Consistency, Availability, Partition Tolerance. A system can satisfy only two out of three.

Highlish: CAP theorem bolta hai ki ek system me teen me se do hi cheeze possible hoti hain: Consistency, Availability, Partition Tolerance.

Q48: What is cloud database?

English: A database service built and accessed via cloud computing platforms.

Highlish: Cloud database matlab internet pe available database service.

Q49: What is MongoDB?

English: MongoDB is a NoSQL, document-based database that stores data in JSON-like format.

Highlish: MongoDB ek document-based NoSQL database hai jo JSON jaisa data store karta hai.

Q50: What are the advantages of NoSQL over RDBMS?

English:

- Scalability
- Schema flexibility
- Better for big data and unstructured data

Highlish:

- Asani se grow hota hai
- Fixed schema nahi chahiye
- Big data aur flexible data ke liye best hai