



UNIT – II: Query Processing and Decomposition & Distributed Query Optimization

Multiple Choice Questions (MCQs)

1. Query processing is mainly used to:

- A) Store data
- B) Retrieve data efficiently
- C) Delete records
- D) Backup database

Answer: B

2. The goal of query optimization is to:

- A) Increase memory
- B) Select the best execution plan
- C) Reduce security
- D) Create tables

Answer: B

3. Query decomposition converts a query into:

- A) Query tree
- B) Data file
- C) Report
- D) Backup

Answer: A

4. The first stage of query processing is:

- A) Optimization
- B) Parsing
- C) Localization
- D) Execution

Answer: B

5. Localization of distributed data means:

- A) Data replication
- B) Mapping global data to local sites
- C) Data deletion
- D) Data encryption

Answer: B

6. Distributed query processing minimizes:

- A) Storage cost
- B) Communication cost

- C) Hardware cost
 - D) Security cost
- Answer: B

7. Query processors are characterized by:

- A) Efficiency and optimization
- B) Printing speed
- C) Screen resolution
- D) Disk color

Answer: A

8. Which layer translates SQL into internal form?

- A) Parsing layer
- B) Execution layer
- C) Storage layer
- D) Network layer

Answer: A

9. Query optimization is performed after:

- A) Query decomposition
- B) Data storage
- C) Report generation
- D) Backup

Answer: A

10. Distributed databases contain data at:

- A) Single location
- B) Multiple locations
- C) Single table
- D) Cloud only

Answer: B

11. Query execution plan determines:

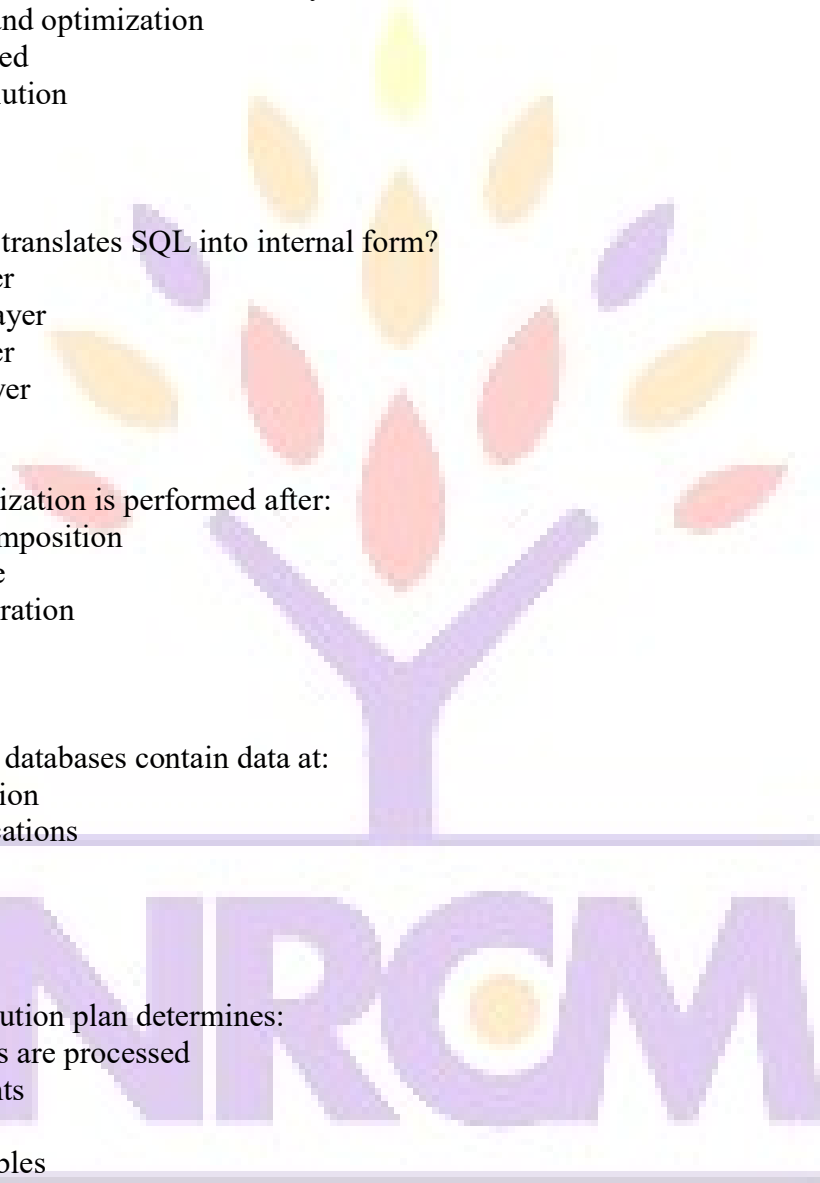
- A) How queries are processed
- B) User accounts
- C) File formats
- D) Network cables

Answer: A

12. Centralized optimization works on:

- A) Distributed systems
- B) Single-site databases
- C) Cloud systems
- D) Mobile devices

Answer: B



13. Cost-based optimization uses:

- A) Estimated resource cost
- B) User input
- C) Hardware size
- D) Password

Answer: A

14. Heuristic optimization depends on:

- A) Rules and experience
- B) Random selection
- C) Storage
- D) Hardware

Answer: A

15. Distributed query optimization includes:

- A) Local processing cost
- B) Communication cost
- C) Both A and B
- D) None

Answer: C

16. Query decomposition eliminates:

- A) Redundant operations
- B) Records
- C) Tables
- D) Users

Answer: A

17. Which component checks syntax?

- A) Parser
- B) Optimizer
- C) Executor
- D) Fragmenter

Answer: A

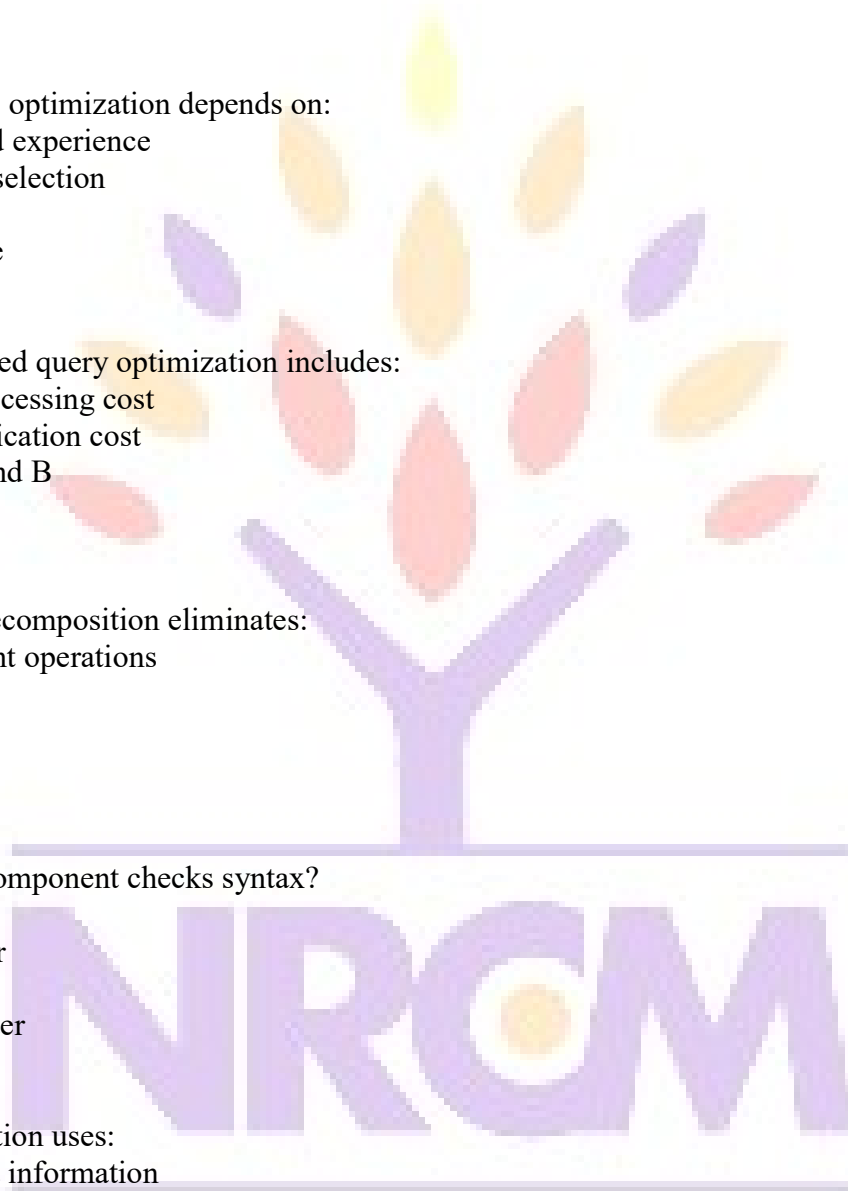
18. Localization uses:

- A) Fragment information
- B) Password
- C) Encryption
- D) Reports

Answer: A

19. The final stage of query processing is:

- A) Query execution
- B) Parsing
- C) Optimization



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D) Localization

Answer: A

20. Distributed optimization improves:

A) Overall performance

B) Screen speed

C) Power usage

D) Hardware size

Answer: A

Fill in the Blanks

1. Query processing retrieves data _____.

Answer: efficiently

2. Query decomposition converts queries into _____ representation.

Answer: internal

3. Query parsing checks _____ and semantics.

Answer: syntax

4. Distributed databases store data across multiple _____.

Answer: sites

5. Query optimization selects the _____ execution plan.

Answer: best

6. Localization maps global relations into local _____.

Answer: fragments

7. Distributed query processing reduces _____ cost.

Answer: communication

8. Query execution occurs after _____.

Answer: optimization

9. Centralized query optimization assumes a _____ database system.

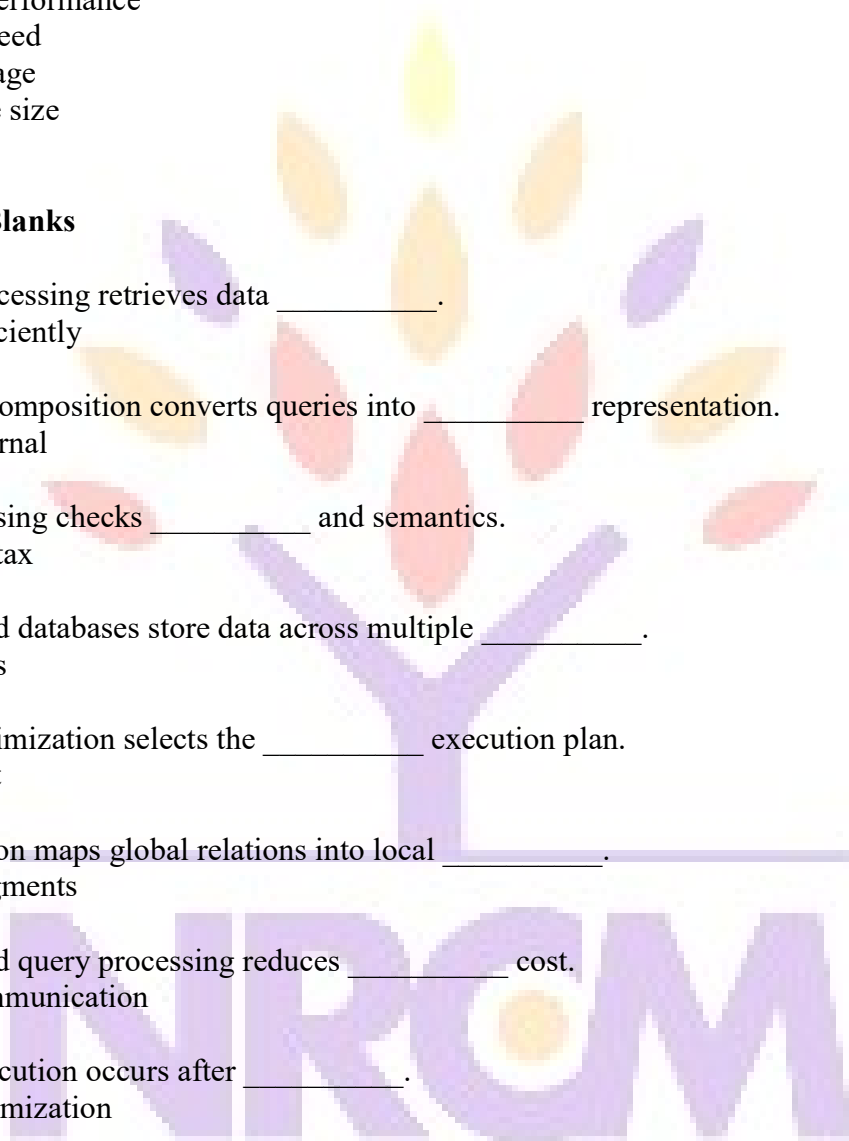
Answer: single-site

10. Query processors improve system _____.

Answer: performance

11. Cost-based optimization depends on estimated _____.

Answer: cost



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12. Query trees are created during query _____.

Answer: decomposition

13. Distributed optimization considers local and _____ costs.

Answer: communication

14. Query processor transforms SQL into _____ operations.

Answer: internal

15. Fragmentation supports data _____.

Answer: localization

16. Query execution uses an execution _____.

Answer: plan

17. Heuristic optimization uses _____ of thumb.

Answer: rules

18. Distributed query processing aims to reduce _____ transfer.

Answer: data

19. The parser verifies query _____.

Answer: correctness

20. Query processing contains decomposition, optimization, and _____.

Answer: execution



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