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| <b>Status</b>    | Finished                                |
| <b>Started</b>   | Monday, 24 February 2025, 3:00 PM       |
| <b>Completed</b> | Monday, 24 February 2025, 3:10 PM       |
| <b>Duration</b>  | 10 mins 51 secs                         |
| <b>Grade</b>     | <b>5.00</b> out of 5.00 ( <b>100%</b> ) |

**Question 1**

Correct

Mark 1.00 out of 1.00

Categorize the following as Relational Database vs NoSQL Database:

1. MongoDB
2. PostgreSQL
3. Neo4j
4. Oracle

- ☐ 1, 4 - Relational; 2, 3 - NoSQL
- ☒ 2, 4 - Relational; 1, 3 - NoSQL ✓
- ☐ 2, 3 - Relational; 1, 4 - NoSQL
- ☐ 1, 2 - Relational; 3, 4 - NoSQL

Your answer is correct.

PostgreSQL, Oracle - Relational databases;

MongoDB, Neo4j - NoSQL databases

The correct answer is:

2, 4 - Relational; 1, 3 - NoSQL

**Question 2**

Correct

Mark 1.00 out of 1.00

Which of the following are challenges in Data Storage?

1. Storing multimodal data
2. Accessing data with low latency
3. Storing complex data such that it can be loaded and run correctly on different hardware

- ☐ Only 1
- ☐ Only 2
- ☐ Only 3
- ☐ Only 1 and 2
- ☐ Only 2 and 3
- ☒ All 1, 2 and 3 ✓

Your answer is correct.

The correct answer is:

All 1, 2 and 3

**Question 3**

Correct

Mark 1.00 out of 1.00

Correctly assign the following statements to MLOps/DevOps based on their differentiating characteristics:

- (i) Focuses on machine learning workflows and models.
- (ii) Combines software development and IT operations.
- (iii) Addresses challenges of model versioning and monitoring.
- (iv) Involves automation and continuous integration/continuous delivery (CI/CD).

- ☒ (i) and (iii) - MLOps; (ii) - DevOps; and (iv) - MLOps/DevOps ✓
- ☐ (i) and (iii) - DevOps; (ii) and (iv) - MLOps
- ☐ (i), (ii), (iii), (iv) - DevOps
- ☐ Only (i) - MLOps; (ii), (iii) and (iv) - DevOps

Your answer is correct.

**MLOps:**

- Focuses on ML workflows and models
- Addresses challenges of model versioning and monitoring
- Involves automation and continuous integration/continuous delivery (CI/CD)

**DevOps:**

- Combines software development and IT operations
- Involves automation and continuous integration/continuous delivery (CI/CD)

The correct answer is:

(i) and (iii) - MLOps; (ii) - DevOps; and (iv) - MLOps/DevOps

**Question 4**

Correct

Mark 1.00 out of 1.00

Which of the following data formats is specifically designed for columnar storage, providing efficient compression and fast data retrieval?

- ☐ JSON
- ☒ Parquet ✓
- ☐ Binary
- ☐ Text

Your answer is correct.

Parquet is a columnar storage data format specifically designed for efficient data compression and fast data retrieval. It stores data in a columnar format, allowing for high-performance queries and selective column reads. Parquet is commonly used in big data processing frameworks and analytical workloads.

The correct answer is:

Parquet

**Question 5**

Correct

Mark 1.00 out of 1.00

Fill in the blanks using the appropriate option:

(i) A \_\_\_\_\_ data model ensures data consistency across tables, ease of modifying the data, data integrity and allows querying and operations manipulation

(ii) A \_\_\_\_\_ data model is schema flexible and designed to handle large scale distributed data and non-uniform data structures

- ☐ (i) Relational (ii) SQL
- ☐ (i) NoSQL (ii) Relational
- ☒ (i) Relational (ii) NoSQL ✓
- ☐ (i) Graph (ii) NoSQL

Your answer is correct.

A Relational data model ensures data consistency across tables, ease of modifying the data, data integrity and allows querying and operations manipulation.

A NoSQL data model is schema flexible and designed to handle large scale distributed data and non-uniform data structures.

The correct answer is:

(i) Relational (ii) NoSQL