

## DP-900

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DP-900

### Sections

1. Describe core data concepts
2. Describe how to work with relational data on Azure
3. Describe how to work with non-relational data on Azure
4. Describe an analytics workload on Azure

## Exam A

### QUESTION 1

You need to query a table named Products in an Azure SQL database.

Which three requirements must be met to query the table from the internet? Each correct answer presents part of the solution. (Choose three.)

**NOTE:** Each correct selection is worth one point.

- A. You must be assigned the Reader role for the resource group that contains the database.
- B. You must have `SELECT` access to the Products table.
- C. You must have a user in the database.
- D. You must be assigned the Contributor role for the resource group that contains the database.
- E. Your IP address must be allowed to connect to the database.

**Correct Answer:** ACE

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

### QUESTION 2

You have an inventory management database that contains the following table.

ProductName	Quantity
Product1	100
Product2	129
Product3	176

Which statement should you use in a SQL query to change the inventory quantity of Product1 to 270?

- A. `INSERT`
- B. `MERGE`
- C. `UPDATE`
- D. `CREATE`

**Correct Answer:** C

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/sql/t-sql/queries/update-transact-sql?view=sql-server-ver15>

### QUESTION 3

Your company needs to implement a relational database in Azure. The solution must minimize ongoing maintenance.

Which Azure service should you use?

- A. Azure HDInsight
- B. Azure SQL Database
- C. Azure Cosmos DB
- D. SQL Server on Azure virtual machines

**Correct Answer:** B

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://azure.microsoft.com/en-us/services/sql-database/#features>

#### QUESTION 4

You are writing a set of SQL queries that administrators will use to troubleshoot an Azure SQL database.

You need to embed documents and query results into a SQL notebook.

What should you use?

- A. Microsoft SQL Server Management Studio (SSMS)
- B. Azure Data Studio
- C. Azure CLI
- D. Azure PowerShell

**Correct Answer:** B

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://www.mssqltips.com/sqlservertip/5997/create-sql-server-notebooks-in-azure-data-studio/>

#### QUESTION 5

Which command-line tool can you use to query Azure SQL databases?

- A. sqlcmd
- B. bcp
- C. azdata
- D. Azure CLI

**Correct Answer:** D

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/az-cli-script-samples-content-guide?tabs=single-database>

#### QUESTION 6

Which statement is an example of Data Definition Language (DDL)?

- A. SELECT
- B. JOIN
- C. MERGE
- D. CREATE

**Correct Answer:** D

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://www.geeksforgeeks.org/difference-between-ddl-and-dml-in-dbms/>

#### QUESTION 7

You need to ensure that users use multi-factor authentication (MFA) when connecting to an Azure SQL database.

Which type of authentication should you use?

- A. service principal authentication
- B. Azure Active Directory (Azure AD) authentication
- C. SQL authentication
- D. certificate authentication

**Correct Answer: B**

**Section: Describe how to work with relational data on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/authentication-mfa-ssms-overview>

#### QUESTION 8

What is a benefit of hosting a database on Azure SQL managed instance as compared to an Azure SQL database?

- A. built-in high availability
- B. native support for cross-database queries and transactions
- C. system-initiated automatic backups
- D. support for encryption at rest

**Correct Answer: B**

**Section: Describe how to work with relational data on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/azure-sql/database/features-comparison>

#### QUESTION 9

You need to design and model a database by using a graphical tool that supports project-oriented offline database development.

What should you use?

- A. Microsoft SQL Server Data Tools (SSDT)
- B. Microsoft SQL Server Management Studio (SSMS)
- C. Azure Databricks
- D. Azure Data Studio

**Correct Answer: A**

**Section: Describe how to work with relational data on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/sql/ssdt/project-oriented-offline-database-development?view=sql-server-ver15>

#### QUESTION 10

You have a transactional application that stores data in an Azure SQL managed instance.

When should you implement a read-only database replica?

- A. You need to generate reports without affecting the transactional workload.
- B. You need to audit the transactional application.
- C. You need to implement high availability in the event of a regional outage.
- D. You need to improve the recovery point objective (RPO).

**Correct Answer:** C

**Section:** Describe how to work with relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/sql/database-engine/availability-groups/windows/active-secondaries-readable-secondary-replicas-always-on-availability-groups?view=sql-server-ver15>

#### QUESTION 11

At which two levels can you set the throughput for an Azure Cosmos DB account? Each correct answer presents a complete solution. (Choose two.)

**NOTE:** Each correct selection is worth one point.

- A. database
- B. item
- C. container
- D. partition

**Correct Answer:** AC

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/cosmos-db/set-throughput>

#### QUESTION 12

You have an Azure Cosmos DB account that uses the Core (SQL) API.

Which two settings can you configure at the container level? Each correct answer presents a complete solution. (Choose two.)

**NOTE:** Each correct selection is worth one point.

- A. the throughput
- B. the read region
- C. the partition key
- D. the API

**Correct Answer:** AC

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://www.sqlshack.com/start-your-journey-with-azure-cosmos-db/>

#### QUESTION 13

Your company is designing a data store that will contain student data. The data has the following format.

StudentNumber	StudentInformation
7634634	First name: Ben Last: Smith Preferred Name: Benjamin
7634634	First Name: Dominik Last Name: Paiha Email Address: dpaiha@contoso.com MCP ID: 931817
7634636	First Name: Reshma Last Name: Patel Phone number: 514-555-1101
7634637	First Name: Yun-Feng Last Name: Peng

Which type of data store should you use?

- A. graph
- B. key/value
- C. object
- D. columnar

**Correct Answer:** D

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

#### QUESTION 14

Which storage solution supports role-based access control (RBAC) at the file and folder level?

- A. Azure Disk Storage
- B. Azure Data Lake Storage
- C. Azure Blob storage
- D. Azure Queue storage

**Correct Answer:** B

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control>

#### QUESTION 15

You need to store data in Azure Blob storage for seven years to meet your company's compliance requirements. The retrieval time of the data is unimportant. The solution must minimize storage costs.

Which storage tier should you use?

- A. Archive
- B. Hot
- C. Cool

**Correct Answer:** A

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

[https://cloud.netapp.com/blog/azure-blob-storage-pricing-the-complete-guide-azure-cvo-blg#H1\\_4](https://cloud.netapp.com/blog/azure-blob-storage-pricing-the-complete-guide-azure-cvo-blg#H1_4)

#### **QUESTION 16**

Which type of non-relational data store supports a flexible schema, stores data as JSON files, and stores the all the data for an entity in the same document?

- A. document
- B. columnar
- C. graph
- D. time series

**Correct Answer:** A

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

#### **QUESTION 17**

You manage an application that stores data in a shared folder on a Windows server.

You need to move the shared folder to Azure Storage.

Which type of Azure Storage should you use?

- A. queue
- B. blob
- C. file
- D. table

**Correct Answer:** B

**Section:** Describe how to work with non-relational data on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/storage/common/storage-use-azcopy-files>

#### **QUESTION 18**

Your company is designing a database that will contain session data for a website. The data will include notifications, personalization attributes, and products that are added to a shopping cart.

Which type of data store will provide the lowest latency to retrieve the data?

- A. key/value
- B. graph
- C. columnar
- D. document

**Correct Answer: C**

**Section: Describe how to work with non-relational data on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/analytical-data-stores>

**QUESTION 19**

Which scenario is an example of a streaming workload?

- A. sending transactions that are older than a month to an archive
- B. sending transactions daily from point of sale (POS) devices
- C. sending telemetry data from edge devices
- D. sending cloud infrastructure metadata every 30 minutes

**Correct Answer: C**

**Section: Describe an analytics workload on Azure**

**Explanation**

**Explanation/Reference:**

**QUESTION 20**

You need to gather real-time telemetry data from a mobile application.

Which type of workload describes this scenario?

- A. Online Transaction Processing (OLTP)
- B. batch
- C. massively parallel processing (MPP)
- D. streaming

**Correct Answer: D**

**Section: Describe an analytics workload on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-in/azure/azure-monitor/overview>

**QUESTION 21**

You have a SQL pool in Azure Synapse Analytics that is only used actively every night for eight hours.

You need to minimize the cost of the SQL pool during idle times. The solution must ensure that the data remains intact.

What should you do on the SQL pool?

- A. Scale down the data warehouse units (DWUs).
- B. Pause the pool.
- C. Create a user-defined restore point.
- D. Delete the pool

**Correct Answer: B**

**Section: Describe an analytics workload on Azure**

**Explanation**

**Explanation/Reference:**

Reference:



<https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-manage-compute-overview>

#### QUESTION 22

Which Azure Data Factory component initiates the execution of a pipeline?

- A. a control flow
- B. a trigger
- C. a parameter
- D. an activity

**Correct Answer:** B

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/data-factory/concepts-pipeline-execution-triggers#trigger-execution>

#### QUESTION 23

Your company has a reporting solution that has paginated reports. The reports query a dimensional model in a data warehouse.

Which type of processing does the reporting solution use?

- A. stream processing
- B. batch processing
- C. Online Analytical Processing (OLAP)
- D. Online Transaction Processing (OLTP)

**Correct Answer:** C

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://datawarehouseinfo.com/how-does-oltp-differ-from-olap-database/>

#### QUESTION 24

What are three characteristics of an Online Transaction Processing (OLTP) workload? Each correct answer presents a complete solution. (Choose three.)

**NOTE:** Each correct selection is worth one point.

- A. denormalized data
- B. heavy writes and moderate reads
- C. light writes and heavy reads
- D. schema on write
- E. schema on read
- F. normalized data

**Correct Answer:** BDE

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-transaction-processing>

**QUESTION 25**

Which two activities can be performed entirely by using the Microsoft Power BI service? Each correct answer presents a complete solution. (Choose two.)

**NOTE:** Each correct selection is worth one point.

- A. report and dashboard creation
- B. report sharing and distribution
- C. data modeling
- D. data acquisition and preparation

**Correct Answer:** AD

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

**QUESTION 26**

You need to develop a solution to provide data to executives. The solution must provide an interactive graphical interface, depict various key performance indicators, and support data exploration by using drill down.

What should you use in Microsoft Power BI?

- A. a dashboard
- B. a report
- C. a dataflow
- D. Microsoft Power Apps

**Correct Answer:** B

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/power-bi/consumer/end-user-dashboards>

<https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-kpi>

<https://docs.microsoft.com/en-us/power-bi/consumer/end-user-drill>

**QUESTION 27**

Which two Azure services can be used to provision Apache Spark clusters? Each correct answer presents a complete solution. (Choose two.)

**NOTE:** Each correct selection is worth one point.

- A. Azure Time Series Insights
- B. Azure HDInsight
- C. Azure Databricks
- D. Azure Log Analytics

**Correct Answer:** BC

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://www.sqlshack.com/a-beginners-guide-to-azure-databricks/>

**QUESTION 28**

You have a quality assurance application that reads data from a data warehouse.

Which type of processing does the application use?

- A. Online Transaction Processing (OLTP)
- B. batch processing
- C. Online Analytical Processing (OLAP)
- D. stream processing

**Correct Answer:** A

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-transaction-processing>

**QUESTION 29**

Which three objects can be added to a Microsoft Power BI dashboard? Each correct answer presents a complete solution. (Choose three.)

**NOTE:** Each correct selection is worth one point.

- A. a report page
- B. a Microsoft PowerPoint slide
- C. a visualization from a report
- D. a dataflow
- E. a text box

**Correct Answer:** ACE

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/power-bi/consumer/end-user-dashboards>

<https://docs.microsoft.com/en-us/power-bi/create-reports/service-dashboard-add-widget>

**QUESTION 30**

Which Azure Data Factory component provides the compute environment for activities?

- A. a linked service
- B. an integration runtime
- C. a control flow
- D. a pipeline

**Correct Answer:** A

**Section:** Describe an analytics workload on Azure

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.microsoft.com/en-us/azure/data-factory/v1/data-factory-compute-linked-services>

**QUESTION 31**

You need to use Transact-SQL to query files in Azure Data Lake Storage from an Azure Synapse Analytics data warehouse.

What should you use to query the files?

- A. Azure Functions
- B. Microsoft SQL Server Integration Services (SSIS)
- C. PolyBase
- D. Azure Data Factory

**Correct Answer: C**

**Section: Describe an analytics workload on Azure**

**Explanation**

**Explanation/Reference:**

Reference:

<https://docs.databricks.com/data/data-sources/azure/synapse-analytics.html>