

Question 1

Descriptive analytics tells you

- ☒ what is most likely to occur in the future.
- ☒ what occurred in the past.
- ☒ which actions you can perform to affect outcomes.
- ☒ why something occurred in the past.

Question 2

In batch processing,

- ☒ data is always inserted one row at a time.
- ☒ data is processed in real-time.
- ☒ latency is expected.
- ☒ processing can only execute serially.

Question 3

An extract, ~~transform~~ and load (ETL) process requires

- ☒ a matching schema in the data source and the data target.
- ☒ a target data store powerful enough to transform data.
- ☒ data that is fully processed before being loaded to the target data store.
- ☒ that the data target be a relational database.

Question 4

An extract, ~~load~~, and transform (ELT) process requires

- ☒ a separate transformation engine.
- ☒ a target data store powerful enough to transform data.
- ☒ data that is fully processed before being loaded to the target data store.
- ☒ a data pipeline that includes a transformation engine.

Question 5

A relational database is appropriate for scenarios that involve a high volume of

- ☒ changes to relationships between entities
- ☒ geographically distributed writes
- ☒ transactional writes
- ☒ writes that have varying data structures

Question 6

Transcribing audio files is an example of

- ☒ cognitive
- ☒ descriptive
- ☒ predictive
- ☒ prescriptive

analytics.

Diagnostic



Question 7

A relational database is appropriate for scenarios that involve a high volume of

- changes to relationships between entities
- geographically distributed writes
- transactional writes
- writes that have varying data structures

Question 9

A relational database must be used when

- a dynamic schema is required.
- data will be stored as key/value pairs.
- storing large images and videos.
- strong consistency guarantees are required.

Question 11

Relational data uses _____ to enforce relationships between different tables.

- collections
- columns
- keys
- partitions

Question 8

A visualization that shows a university's current student enrollment versus the maximum capacity is an example of _____ analytics.

- cognitive
- descriptive
- predictive
- prescriptive

Question 10

_____ natively support the analysis of relationships between entities.

- Column family databases
- Document databases
- Graph databases
- Key-value stores

Question 12

Creating closed caption text for audio files is an example of _____ analytics.

- cognitive
- descriptive
- predictive
- prescriptive



Question 13

```
customer: {  
  "first name" : "Ben",  
  "last name" : "Smith",  
  "address": {  
    "line 1" : "161 Azure Ln",  
    "line 2" : "Palo Alto",  
    "ZIP code" : "54762"  
  },  
  "social media": [  
    {  
      "service" : "twitter",  
      "handle" : "@bensmith"  
    },  
    {  
      "service" : "linkedin",  
      "handle" : "bensmith"  
    }  
  ],  
  "phone numbers": [  
    {  
      "type" : "mobile",  
      "number" : "555-555-555"  
    }  
  ]  
}
```

Customer is [answer choice].

- a nested array
- a nested object
- a root object

Address is [answer choice].

- a nested array
- a nested object
- a root object

Social media is [answer choice].

- a nested array
- a nested object
- a root object



Question 14

Statements	Yes	No
Normalization involves eliminating relationships between database tables.	<input type="radio"/>	<input checked="" type="radio"/>
Normalizing a database reduces data redundancy.	<input checked="" type="radio"/>	<input type="radio"/>
Normalization improves data integrity.	<input checked="" type="radio"/>	<input type="radio"/>

Question 15

Statements	Yes	No
Batch processing can output data to a file store	<input checked="" type="radio"/>	<input type="radio"/>
Batch processing can output data to a relational database	<input checked="" type="radio"/>	<input type="radio"/>
Batch processing can output data to a NoSQL database	<input checked="" type="radio"/>	<input type="radio"/>

Question 16

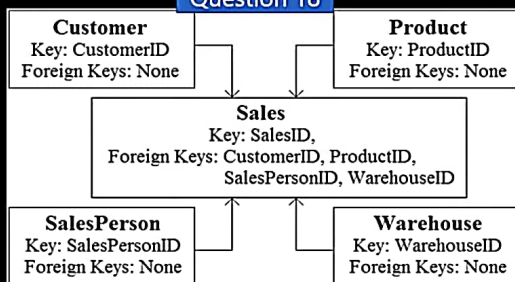
Statements	Yes	No
Platform as a service (PaaS) database offerings in Azure require less setup and configuration effort than infrastructure as a service (IaaS) database offerings.	<input checked="" type="radio"/>	<input type="radio"/>
Platform as a service (PaaS) database offerings in Azure provide administrators with the ability to control and update the operating system version.	<input type="radio"/>	<input checked="" type="radio"/>
All relation and non-relational platform as a service (PaaS) database offerings in Azure can be paused to reduce costs.	<input type="radio"/>	<input checked="" type="radio"/>

Question 17

Statements	Yes	No
Platform as a service (PaaS) database offerings in Azure provide built-in high availability.	<input checked="" type="radio"/>	<input type="radio"/>
Platform as a service (PaaS) database offerings in Azure provide configurable scaling options.	<input checked="" type="radio"/>	<input type="radio"/>
Platform as a service (PaaS) database offerings in Azure reduce the administrative overhead for managing hardware.	<input checked="" type="radio"/>	<input type="radio"/>



Question 18



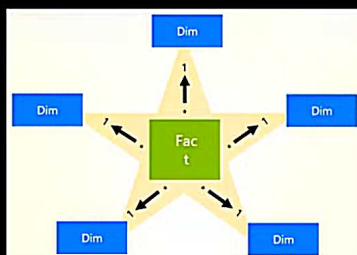
The data model is a [answer choice].

- transactional model
- star schema
- snowflake schema

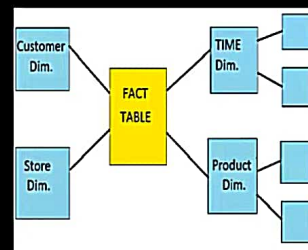
Customer is a [answer choice] table.

- fact
- dimension
- bridge

The Star schema



The snowflake schema is a variation of the star schema, featuring normalization of dimension tables.



Video Objective: DP 900: Real exam questions – PART 2



Question 19

A key/value data store is optimized for

- enforcing constraints
- simple lookups
- table joins
- transactions

Question 20

Relational data uses _____ to enforce relationships between different tables.

- collections
- columns
- keys
- partitions

Question 21

Index	Table	A database object that holds data
View	View	A database object whose content is defined by a query
Table	Index	A database object that helps improve the speed of data retrieval

Question 22

Data Types	Answer Area
Image files	Image files
Key/value pairs	Relationships between employees
Relationships between employees	Key/value pairs

Question 23

By default, each Azure SQL database is protected by

- a network security group (NSG).
- a server-level firewall.
- Azure Firewall.
- Azure Front Door.

Question 24

The massively parallel processing (MPP) engine of Azure Synapse Analytics

- distributes processing across compute nodes.
- distributes processing across control nodes.
- redirects client connections across compute nodes.
- redirects client connections across control nodes.



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The Tech
BlackBoard

Question 25

Relational data uses _____ to enforce relationships between different tables.

- collections
- columns
- keys
- partitions

Question 26

Creating closed caption text for audio files _____ analytics.

- cognitive
- descriptive
- predictive
- prescriptive

Question 27

_____ is an object associated with a table that sorts and stores the data rows in the table based on their key values.

- A clustered index
- A FileTable
- A foreign key
- A stored procedure

Question 28

Transparent Data Encryption (TDE) encrypts _____

- a column to protect data at rest and in transit.
- queries and their results in order to protect data in transit.
- the database to protect data at rest.
- the server to protect data at rest.

Question 29

Components

Authentication	Firewall	Prevent access to an Azure SQL database from another network.
Firewall	Authentication	Support Azure Active Directory (Azure AD) sign-ins to an Azure SQL database.
Encryption	Encryption	Ensure that sensitive data never appears as plain text in an Azure SQL database.

Question 30

Workload Types

Batch

Batch

Data for a product catalog will be loaded every 12 hours to a data warehouse

Streaming

Streaming

Thousands of data sets per second for online purchases will be loaded into a data warehouse real time

Batch

Updates to inventory data be loaded to a data warehouse every 1 million transactions.



Question 31

Visualizations

Key Influencer

Scatter

Treemap

Treemap

A chart of colored, nested rectangles that displays individual data points represented by the size and color of a relative rectangle.

Key influencer

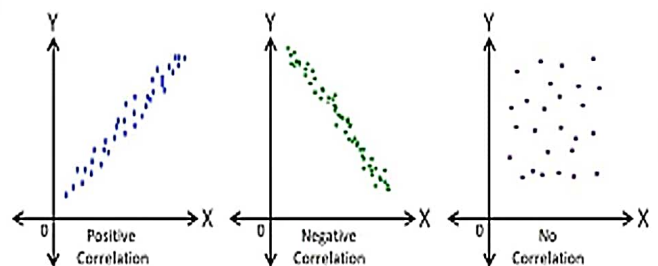
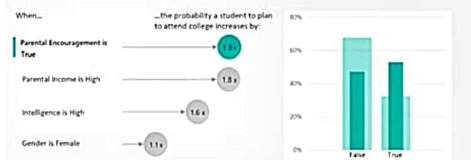
A chart that displays the major contributors of a selected result or value.

Scatter

A chart that shows the relationship between two numerical values.

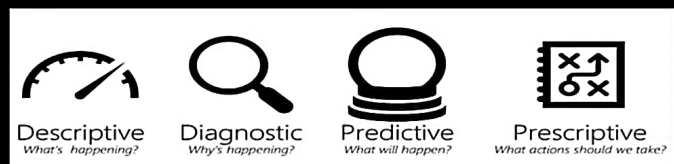
Key influencers Top profiles

What influences a student's plans to attend college?



Question 32

Analytics Types	Answer Area
Cognitive	Diagnostic Why did sales increase last month?
Diagnostic	Prescriptive How do I allocate my budget to buy different inventory items?
Descriptive	Descriptive Which people are mentioned in a company's business documents?
Predictive	
Prescriptive	



Question 33

Your company plans to load data from a customer relationship management (CRM) system to a data warehouse by using an extract, load, and transform (ELT) process. Where does data processing occur for each stage of the ELT process? To answer, drag the appropriate locations to the correct stages. Each location may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Locations	
An in-memory data integration tool	Extract: The CRM system
The CRM system	Load: The data warehouse
The data warehouse	Transform: An in-memory data integration tool

Question 34

Components	
Dataset	Dataset A representation of data structures within data stores
Linked service	Linked service The information used to connect to external resources
Mapping data flow	Pipeline A logical grouping of activities that performs a unit of work and can be scheduled
Pipeline	



Video Objective: DP 900: Real exam questions – PART 3



Question 35

APIs

Cassandra API
Gremlin API
MongoDB API
Table API

Answer Area

Gremlin API Graph data
MongoDB API JSON documents
Table API Key/value data

Question 36

DRAG DROP -

Match the types of data to the appropriate Azure data services.

To answer, drag the appropriate data type from the column on the left to its service on the right. Each data type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.

Select and Place:

Data Types

Image files
Key/value pairs
Relationships between employees

Answer Area

Image Files Azure Blob storage
Relationships between employees Azure Cosmos DB Gremlin API
Key/value pairs Azure Table storage

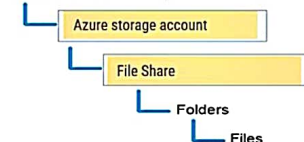
Question 37

Match the Azure Data Lake Storage Gen2 terms to the appropriate levels in the hierarchy.
To answer, drag the appropriate term from the column on the left to its level on the right. Each term may be used once, more than once, or not at all.

Terms

Azure Storage account
File share
Container

Azure Resource Group



Question 38

PostgreSQL on Azure VMs:

Infrastructure as a service (IaaS)
Platform as a service (PaaS)
Software as a service (SaaS)

Azure Database for PostgreSQL:

Infrastructure as a service (IaaS)
Platform as a service (PaaS)
Software as a service (SaaS)



Question 39

You need to create an Azure Storage account. Data in the account must replicate outside the Azure region automatically. Which two types of replication can you use for the storage account? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- A. zone-redundant storage (ZRS)
- B. read-access geo-redundant storage (RA-GRS)
- C. locally-redundant storage (LRS)
- D. geo-redundant storage (GRS)

Question 40

You have a SQL query that combines customer data and order data. The query includes calculated columns. You need to create a database object that would allow other users to rerun the same SQL query. What should you create?

- A. an index
- B. a view
- C. a scalar function
- D. a table

Question 41

What are two characteristics of real-time data processing? Each correct answer presents a complete solution.

- A. Data is processed periodically
- B. Low latency is expected
- C. High latency is acceptable
- D. Data is processed as it is created

Question 42

Which statement is an example of Data Manipulation Language (DML)?

- A. REVOKE
- B. DISABLE
- C. INSERT
- D. GRANT



Question 43

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

Question 44

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

Question 45

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).

Question 46

You need to create an Azure resource to store data in Azure Table storage.

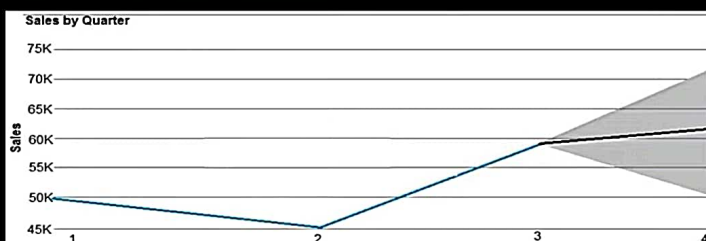
Which command should you run?

- A. az storage share create
- B. az storage account create
- C. az cosmosdb create
- D. az storage container create



Video Objective: DP 900: Real exam questions – PART 4

Your company recently reported sales from the third quarter.
You have the chart below



Question 47

Which type of analysis is shown in the fourth quarter?

- A. predictive
- B. prescriptive
- C. descriptive
- D. diagnostic

Relational data is stored in

Question 48

- a file system as unstructured data.
- a hierarchal folder structure.
- a tabular form of rows and columns.
- comma-separated value (CSV) files.

A block of code that runs in a database is called

Question 49

- a stored procedure.
- a table.
- a view.
- an index.

Your company needs to implement a relational database in Azure. The solution must minimize ongoing maintenance. Which Azure service should you use?

Question 50

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



Video Objective: DP 900: Real exam questions – PART 5



Question 51

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

Question 53

You need to store data in Azure Blob Storage for ten years as per your company needs. The data is rarely accessed. Choose the storage tier best suited for this?

- a) Hot
- b) Cool
- c) Archive

Question 52

You have an e-commerce application that reads and writes data to an Azure SQL database. Which type of processing does the application use?

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

Question 54

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.



Question 55

When can you use an Azure Resource Manager template?

- A. to automate the creation of an interdependent group of Azure resources in a repeatable way
- B. to apply Azure policies for multi-tenant deployments
- C. to provision Azure subscriptions
- D. to control which services and feature administrators and developers can deploy from the Azure portal

Question 56

You are deploying a software as a service (SaaS) application that requires a relational database for Online Transaction Processing (OLTP).

Which Azure service should you use to support the application?

- A. Azure Cosmos DB
- B. Azure HDInsight
- C. Azure SQL Database
- D. Azure Synapse Analytics

Question 57

You have an e-commerce application that reads and writes data to an Azure SQL database.

Which type of processing does the application use?

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

Question 58

What are two benefits of platform as a service (PaaS) relational database offerings in Azure, such as Azure SQL Database? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. access to the latest features
- B. complete control over backup and restore processes
- C. in-database machine learning services
- D. reduced administrative effort for managing the server infrastructure



Question 59

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

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

Question 60

Select Yes if statement is true otherwise, select No.

Statements:

- Azure SQL Database includes a fully managed backup service
- Azure SQL Database has built-in high availability
- Azure SQL Database can use Azure Advanced Threat Protection (ATP)

Yes

No

<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>



Question 61

DRAG DROP -

You have a table named Sales that contains the following data.

SalesDate	SalesAmount	ProductID
4-Apr-20	\$2,000	1
5-Apr-20	\$40	2
5-Apr-20	\$2,300	1
6-Apr-20	\$40	3
6-Apr-20	\$200	4

You need to query the table to return the average sales amount per day. The output must produce the following results.

SalesDate	AVG(SalesAmount)
4-Apr-20	\$2,000
5-Apr-20	\$1,170
6-Apr-20	\$120

How should you complete the query? To answer, drag the appropriate values to the correct targets. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Values

CREATE	GROUP BY
ORDER BY	SELECT

Answer Area

Value	SalesDate, AVG(SalesAmount)
FROM Sales	
Value	SalesDate
ORDER BY SalesDate	

```
SELECT SalesDate, AVG(SalesAmount)
FROM Sales
GROUP BY SalesDate
ORDER BY SalesDate
```



Video Objective: DP 900: Real exam questions – PART 6



Question 62

When provisioning an Azure Cosmos DB account, which feature provides redundancy within an Azure region?

- A. multi-master replication
- B. Availability Zones**
- C. the strong consistency level
- D. automatic failover

Question 63

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**

Question 64

What is a benefit of the Azure Cosmos DB Table API as compared to Azure Table storage?

- A. provides resiliency if an Azure region fails
- B. supports partitioning
- C. provides a higher storage capacity
- D. supports a multi-master model**

Question 65

You need to store data by using Azure Table storage. What should you create first?

- A. an Azure Cosmos DB instance
- B. a storage account**
- C. a blob container
- D. a table



Video Objective: DP 900: Real exam questions – PART 6



Question 66

What is the primary purpose of a data warehouse?

- A. to provide answers to complex queries that rely on data from multiple sources
- B. to provide transformation services between source and target data stores
- C. to provide read-only storage of relational and non-relational historical data
- D. to provide storage for transactional line-of-business (LOB) applications

Question 68

You need to recommend a data store service that meets the following requirements:

- ☑ Native SQL API access
- ☑ Configurable indexes

What should you recommend?

- A. Azure Files
- B. Azure Blob storage
- C. Azure Table storage
- D. Azure Cosmos DB

Question 67

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

Question 69

You have an application that runs on Windows and requires access to a mapped drive. Which Azure service should you use?

- A. Azure Files
- B. Azure Blob storage
- C. Azure Cosmos DB
- D. Azure Table storage



Question 70

Your company needs to design a database that show how changes in network traffic in one area of a network affect network traffic in other areas of the network.

Which type of data store should you use?

- a) Graph
- b) Key/value
- c) Document
- d) columnar



Question 71

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) Graph
- b) Key/value
- c) Document
- d) Columnar

Column-family database is the low latency store type.

Examples

- Recommendations
- Personalization
- Sensor data
- Telemetry
- Messaging
- Social media analytics
- Web analytics
- Activity monitoring
- Weather and other time-series data

Question 72

Batch workloads

- process data in memory, row-by-row.
- collect and process data at most once a day.
- process data as new data is received in near real-time.
- collect data and then process the data when a condition is met.



Question 73

What are three characteristics of an Online Transaction Processing (OLTP) workload? Choose three!

- 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

Question 74

Which two activities can be performed entirely by using the Microsoft Power BI service without relaying on Power BI desktop?

- a) A report and dashboard creation
- b) Report sharing and distribution
- c) Data modeling
- d) Data acquisition and preparation

Question 75

Select Yes if statement is true otherwise, select No.

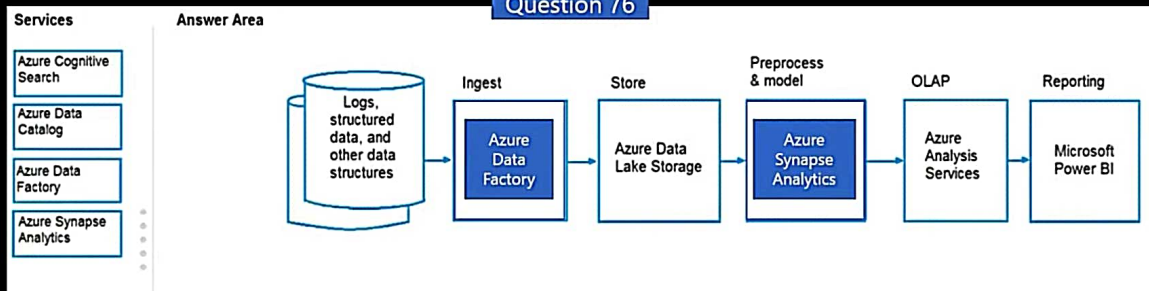
Statements:

- Processing salary payments once a month is an example of a batch workload
- A wind turbine sends 50 sensor reading per second is streaming workload.
- A home electricity meter that sends readings once a day to an energy provider is an example of streaming workload.

Yes	No
<input checked="" type="radio"/>	<input type="radio"/>
<input checked="" type="radio"/>	<input type="radio"/>
<input type="radio"/>	<input checked="" type="radio"/>



Question 76



Question 77

Azure Data Studio	Microsoft SQL Server Management Studio (SSMS)	A graphical tool for managing SQL Server or Azure SQL databases that supports access, configuration, management, and administration tasks.
Microsoft SQL Server Data Tools (SSDT)	Microsoft Visual Studio Code	A lightweight source code editor with an mssql extension that supports connections to SQL Server and a rich editing experience for T-SQL.
Microsoft SQL Server Management Studio (SSMS)	Microsoft Data Studio	A lightweight editor that can run on-demand SQL queries and view and save results as text, JSON, or Microsoft Excel files.
Microsoft Visual Studio Code	Microsoft SQL Server Data Tools (SSDT)	A development tool for building Azure SQL databases, Microsoft SQL Server relational databases, SQL Server Analysis Services (SSAS) data models, SQL Server Integration Services (SSIS) packages, and SQL Server Reporting Services (SSRS) reports.



Question 78

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

Question 79

Complete the sentence:

You can query a graph database in Azure COSMOS DB

- as a JSON document by using a SQL-like language
- as a partitioned row store by using Cassandra Query Language (CQL)
- as a partitioned row store by using Language-Integrated Query (LINQ)
- as nodes and edges by using the Gremlin Language



Question 80

