DP-900 Microsoft Azure Data Fundamentals

Question #1

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

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.

Answer Area

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.

Answer:
Reference:
https://demand-planning.com/2020/01/20/the-differences-between-descriptive-diagnostic-predictive-cognitive-analytics/
Question #2

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Normalization involves eliminating relationships between database tables.	○	○
Normalizing a database reduces data redundancy.	○	○
Normalization improves data integrity.	○	○

Answer:

Answer Area

Statements	Yes	No
Normalization involves eliminating relationships between database tables.	○	○
Normalizing a database reduces data redundancy.	○	○
Normalization improves data integrity.	○	○

Reference:
https://www.sqlshack.com/what-is-database-normalization-in-sql-server/
Question #3

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

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.

Answer Area

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.

Answer:
In the ELT pipeline, the transformation occurs in the target data store. ELT only works well when the target system is powerful enough to transform the data efficiently.
InAnswers:
➠ The data does not need to be fully processed: Often, the three ETL phases are run in parallel to save time. For example, while data is being extracted, a transformation process could be working on data already received and prepare it for loading, and a loading process can begin working on the prepared data, rather than waiting for the entire extraction process to complete.
➠ The target does need to be a relational database.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/etl
Question #4

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

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.

Answer Area

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.

Answer:
Reference:
https://www.bmc.com/blogs/what-is-batch-processing-batch-processing-explained/

Question #5

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

Transcribing audio files is an example of [▼] analytics.

- cognitive
- descriptive
- predictive
- prescriptive

Answer Area

Transcribing audio files is an example of [▼] analytics.

- cognitive
- descriptive
- predictive
- prescriptive

Answer:
Reference:
https://azure.microsoft.com/en-us/services/cognitive-services/speech-services/
Question #6

DRAG DROP -
Match the types of analytics that can be used to answer the business questions.
To answer, drag the appropriate analytics type from the column on the left to its question on the right. Each analytics type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:

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

Answer: *InAnswer:*
Box 1: Diagnostic -
Diagnostic Analytics: At this stage you can begin to answer some of those why questions. Historical data can begin to be measured against other data to answer the question of why something happened in the past. This is the process of gathering and interpreting different data sets to identify anomalies, detect patters, and determine relationships.

Box 2: Prescriptive -
Prescriptive analytics is a combination of data, mathematical models, and various business rules to infer actions to influence future desired outcomes.
Predictive analytics, broadly speaking, is a category of business intelligence that uses descriptive and predictive variables from the past to analyze and identify the likelihood of an unknown future outcome

Box 3: Descriptive -
Generally speaking, data analytics comes in four types:
Descriptive, to answer the question: What's happening?
Diagnostic, to answer the question: Why's happening?
Predictive, to answer the question: What will happen?
Prescriptive, to answer the question: What actions should we take?

Reference:
https://demand-planning.com/2020/01/20/the-differences-between-descriptive-diagnostic-predictive-cognitive-analytics/
https://azure.microsoft.com/en-us/blog/answering-whats-happening-whys-happening-and-what-will-happen-with-iot-analytics/

Question #7

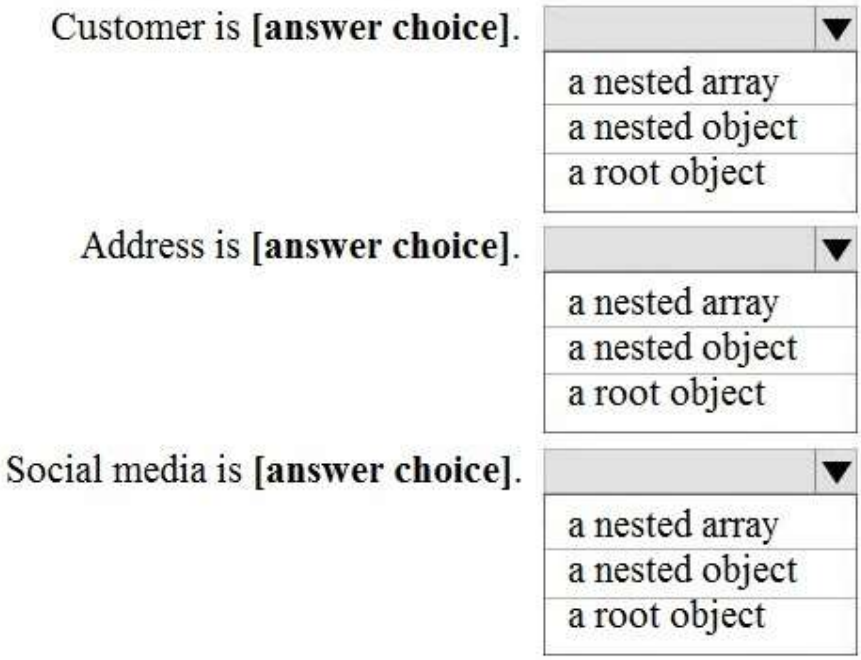
HOTSPOT -
You have the following JSON document.

```
"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"
        }
    ]
}
```

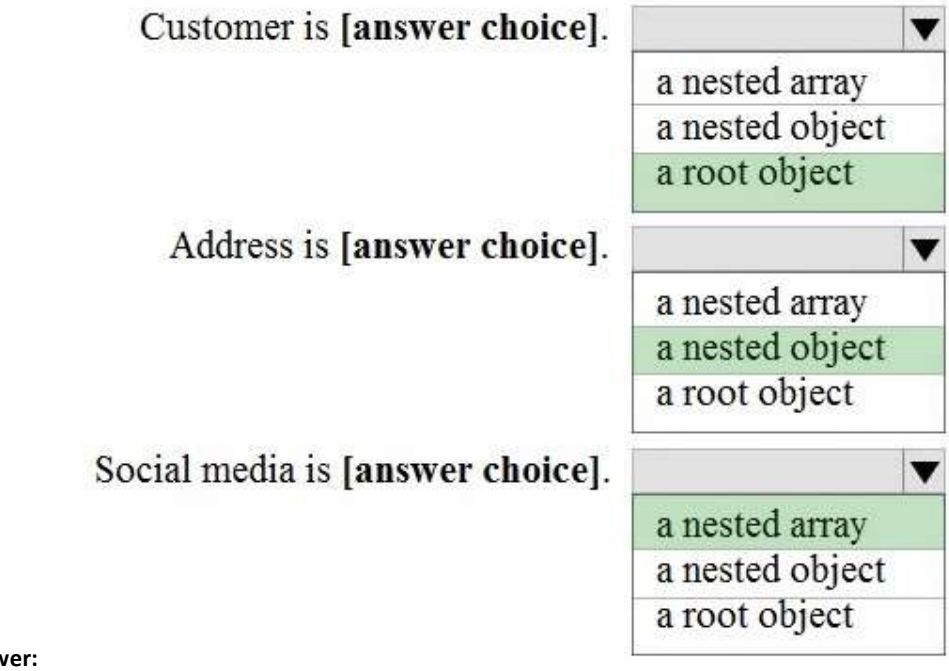
Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the JSON document.
NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area



Answer Area



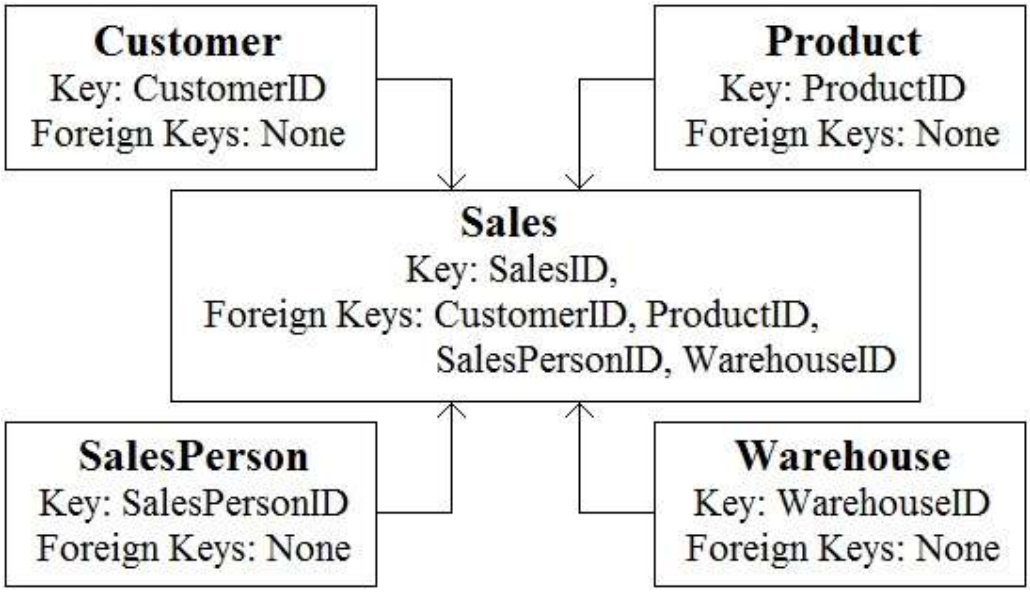
Answer:

Reference:
https://www.w3schools.com/js/js_json_arrays.asp
https://www.w3schools.com/js/js_json_objects.asp

Question #8

HOTSPOT -

You are reviewing the data model shown in the following exhibit.



Use the drop-down menus to select the answer choice that completes each statement based on the information presented in the graphic.

NOTE: Each correct selection is worth one point

Hot Area:

Answer Area

The data model is a **[answer choice]**.

- transactional model
- star schema
- snowflake schema

Customer is a **[answer choice]** table.

- fact
- dimension
- bridge

Answer Area

The data model is a **[answer choice]**.

- transactional model
- star schema
- snowflake schema

Customer is a **[answer choice]** table.

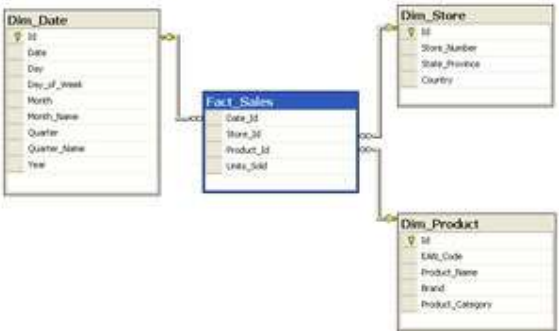
- fact
- dimension
- bridge

Answer:

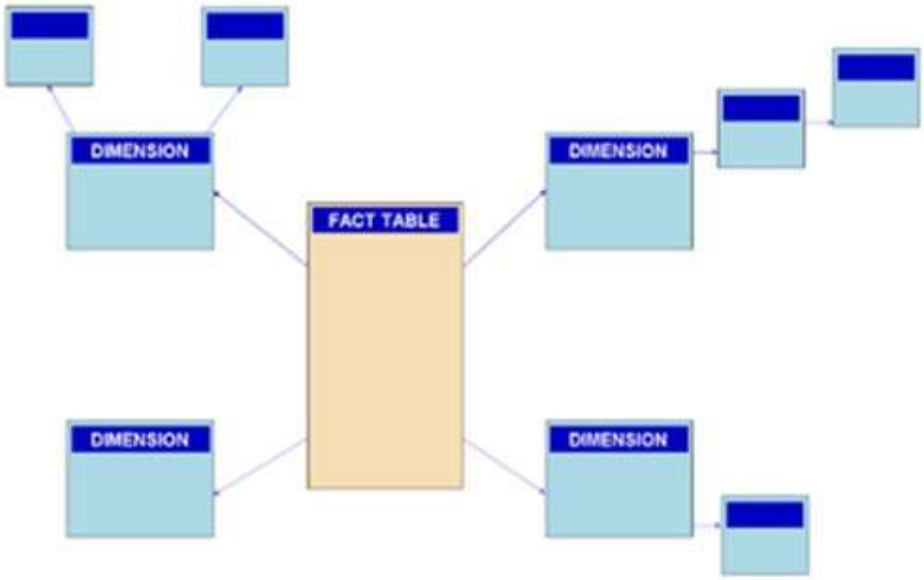
Box 1: star schema -

In computing, the star schema is the simplest style of data mart schema and is the approach most widely used to develop data warehouses and dimensional data marts. The star schema consists of one or more fact tables referencing any number of dimension

tables. The star schema is an important special case of the snowflake schema, and is more effective for handling simpler queries.
Example:



InAnswers:
The data in the question is not normalized.
The snowflake schema is a variation of the star schema, featuring normalization of dimension tables. Example:



Note: A snowflake schema is a logical arrangement of tables in a multidimensional database such that the entity relationship diagram resembles a snowflake shape. The snowflake schema is represented by centralized fact tables which are connected to multiple dimensions.[citation needed]. "Snowflaking" is a method of normalizing the dimension tables in a star schema. When it is completely normalized along all the dimension tables, the resultant structure resembles a snowflake with the fact table in the middle.

Box 2: dimension -
The star schema consists of one or more fact tables referencing any number of dimension tables.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-tables-overview
https://en.wikipedia.org/wiki/Star_schema https://en.wikipedia.org/wiki/Snowflake_schema https://azure.microsoft.com/en-us/blog/data-models-within-azure-analysis-services-and-power-bi/
Question #9

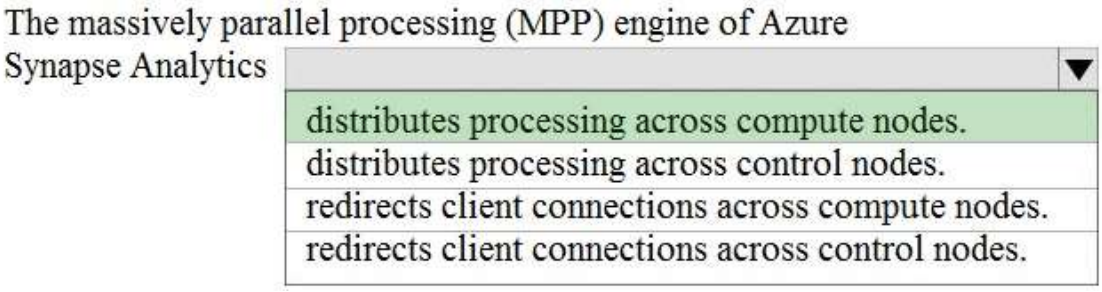
HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

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.

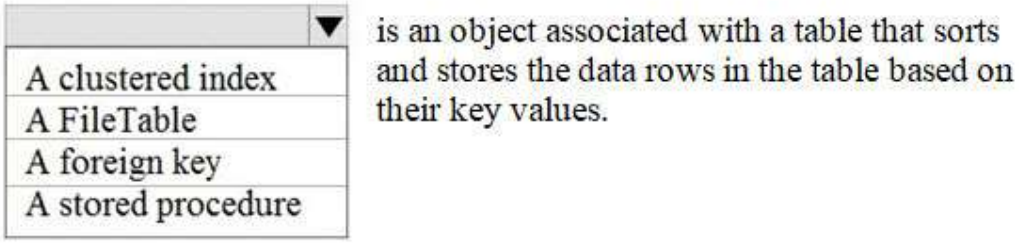
Answer Area



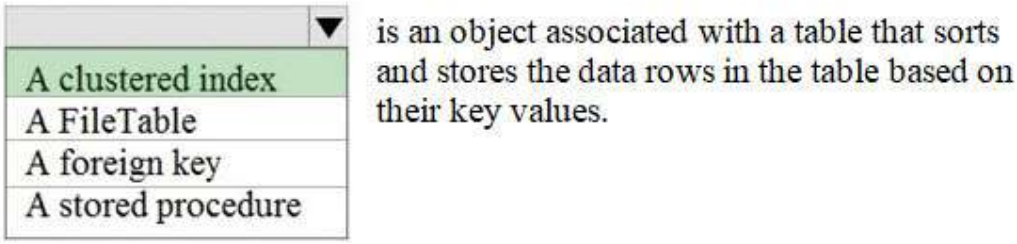
Answer:
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/massively-parallel-processing-mpp-architecture
Question #10

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area



Answer Area



Answer:
Reference:
https://docs.microsoft.com/en-us/sql/relational-databases/indexes/clustered-and-nonclustered-indexes-described?view=sql-server-ver15
Question #11

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

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

Answer Area

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

Answer:

Disadvantages of non-relational databases include: Data Consistency ‚€" non-relational databases do not perform ACID transactions.
Note: Relational databases are optimized for writes. They are optimized for consistency and availability. Advantages of relational databases include simplicity, ease of data retrieval, data integrity, and flexibility.
InAnswers:
Use a relational database when data that you work with is structured, and the structure is not subject to frequent changes.
Use Cloud storage (no relational database) for geographically distributed writes.
Reference:
https://towardsdatascience.com/choosing-the-right-database-c45cd3a28f77
Question #12

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Batch processing can output data to a file store	○	○
Batch processing can output data to a relational database	○	○
Batch processing can output data to a NoSQL database	○	○

Answer Area

Statements	Yes	No
Batch processing can output data to a file store	○	○
Batch processing can output data to a relational database	○	○
Batch processing can output data to a NoSQL database	○	○

Answer:
Box 1: Yes -
Big data solutions often use long-running batch jobs to filter, aggregate, and otherwise prepare the data for analysis. Usually these jobs involve reading source files from scalable storage (like HDFS, Azure Data Lake Store, and Azure Storage), processing them, and writing the output to new files in scalable storage.

Box 2: No -

Box 3: No -
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/big-data/batch-processing
Question #13

DRAG DROP -
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.
NOTE: Each correct selection is worth one point.
Select and Place:

Locations

- An in-memory data integration tool
- The CRM system
- The data warehouse

Answer Area

Extract:	Location
Load:	Location
Transform:	Location

Answer:

Locations

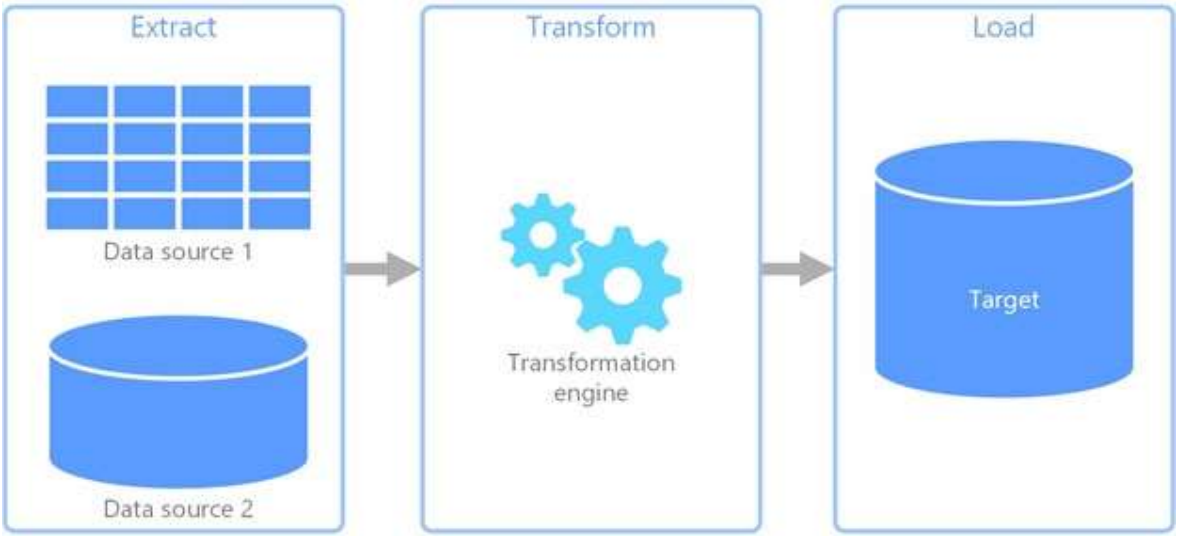
- An in-memory data integration tool
- The CRM system
- The data warehouse

Answer Area

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

Box 1: The CRM system -
Data is extracted from the CRM system.

Box 2: The data warehouse -
Data is loaded to the data warehouse.
Box 3: An in-memory data integration tool
The data transformation that takes place usually involves various operations, such as filtering, sorting, aggregating, joining data, cleaning data, deduplicating, and validating data.



Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/etl
Question #14

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

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

- cognitive
- descriptive
- predictive
- prescriptive

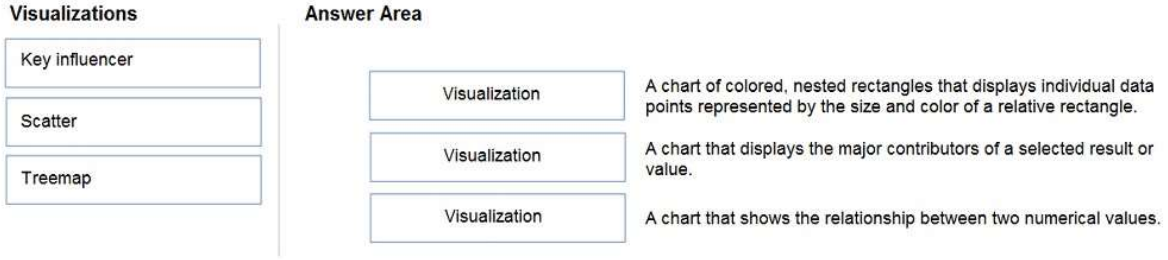
Answer Area

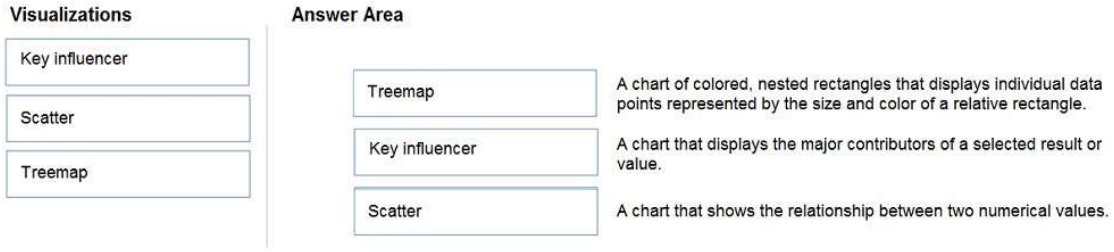
A visualization that shows a university's current student enrollment versus the maximum capacity is an example of [▼] analytics.

- cognitive
- descriptive
- predictive
- prescriptive

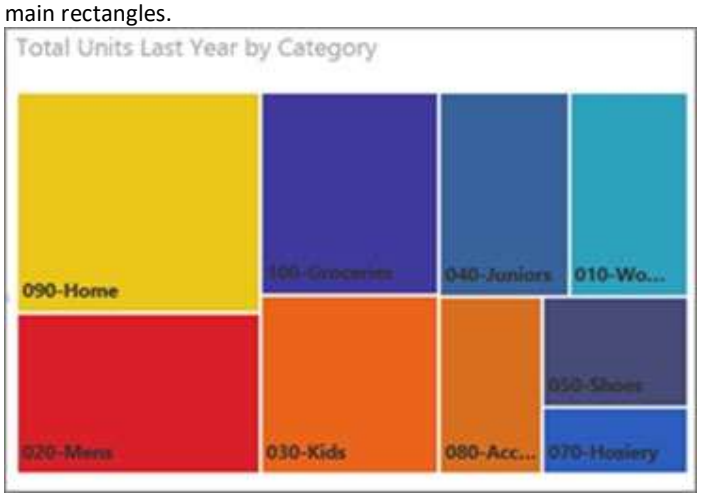
Answer:
Generally speaking, data analytics comes in four types (Figure 1):
Descriptive, to answer the question: What's happening?
Diagnostic, to answer the question: Why's happening?
Predictive, to answer the question: What will happen?
Prescriptive, to answer the question: What actions should we take?
Reference:
https://azure.microsoft.com/en-us/blog/answering-whats-happening-whys-happening-and-what-will-happen-with-iot-analytics/
Question #15

DRAG DROP -
Match the types of visualizations to the appropriate descriptions.
To answer, drag the appropriate visualization type from the column on the left to its description on the right. Each visualization type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





Answer:
Box 1: Tree map -
Treemaps are charts of colored rectangles, with size representing value. They can be hierarchical, with rectangles nested within the main rectangles.



Box 2: Key influencer -
A key influencer chart displays the major contributors to a selected result or value.

Box 3: Scatter -
Scatter and Bubble charts display relationships between 2 (scatter) or 3 (bubble) quantitative measures -- whether or not, in which order, etc.
Question #16

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 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)

Answer: *BD*
D: Azure Storage offers two options for copying your data to a secondary region:
➠ Geo-redundant storage (GRS)
➠ Geo-zone-redundant storage (GZRS)
B: With GRS or GZRS, the data in the secondary region isn't available for read or write access unless there is a failover to the secondary region. For read access to the secondary region, configure your storage account to use read-access geo-redundant storage (RA-GRS) or read-access geo-zone-redundant storage (RA-
GZRS).
Reference:
https://docs.microsoft.com/en-us/azure/storage/common/storage-redundancy#redundancy-in-a-secondary-region
Question #17

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

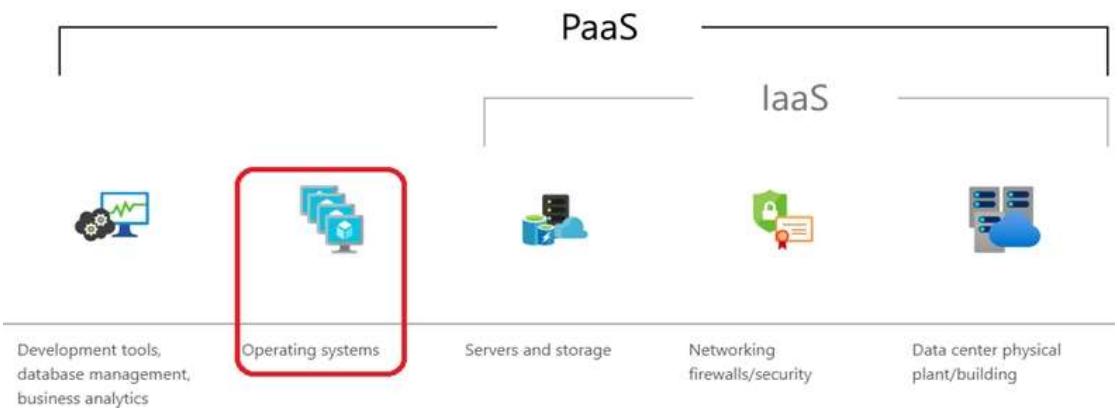
Statements	Yes	No
Platform as a service (PaaS) database offerings in Azure require less setup and configuration effort than infrastructure as a service (IaaS) database offerings.	○	○
Platform as a service (PaaS) database offerings in Azure provide administrators with the ability to control and update the operating system version.	○	○
All platform as a service (PaaS) database offerings in Azure can be paused to reduce costs.	○	○

Answer Area

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.	○	○
Platform as a service (PaaS) database offerings in Azure provide administrators with the ability to control and update the operating system version.	○	○
All platform as a service (PaaS) database offerings in Azure can be paused to reduce costs.	○	○

Answer:
Box 1: Yes -
Like IaaS, PaaS includes infrastructure ‡€" servers, storage, and networking ‡€" but also middleware, development tools, business intelligence (BI) services, database management systems, and more. PaaS is designed to support the complete web application lifecycle: building, testing, deploying, managing, and updating.
PaaS allows you to avoid the expense and complexity of buying and managing software licenses, the underlying application infrastructure and middleware, container orchestrators such as Kubernetes, or the development tools and other resources

Box 2: Yes -
You manage the applications and services you develop, and the cloud service provider typically manages everything else.



Box 3: No -
There really is no way to pause / stop billing for your Azure SQL Database.
Microsoft's official answer "Yes, you can export your database. Delete the Azure SQL database and that will pause billing. Then when you need it you can create a new database and import your previously exported DB."
Reference:
https://azure.microsoft.com/en-us/overview/what-is-paas
https://feedback.azure.com/forums/217321-sql-database/suggestions/6931152-please-add-ability-to-temporarily-turn-off-on-sql
Question #18

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

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

Answer: *C*
Data Manipulation Language (DML) statements:
➠ DELETE
➠ INSERT
➠ UPDATE
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-reference-tsql-statements
Question #19

You have a SQL query that combines customer data and order data. The query includes calculated columns.
You need to persist the SQL query so that other users can use the query.
What should you create?

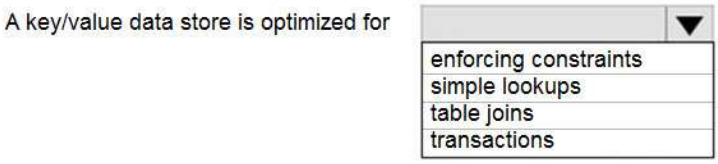
- A. an index
- B. a view
- C. a scalar function
- D. a table

Answer: *B*
A view is a virtual table whose contents are defined by a query. A view acts as a filter on the underlying tables referenced in the view. The query that defines the view can be from one or more tables or from other views in the current or other databases.
Reference:
https://docs.microsoft.com/en-us/sql/relational-databases/views/views
Question #20

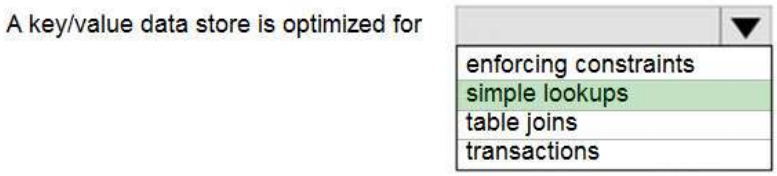
HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area



Answer Area



Answer:

Box 1: simple lookups -

A key/value store associates each data value with a unique key. Most key/value stores only support simple query, insert, and delete operations. To modify a value
(either partially or completely), an application must overwrite the existing data for the entire value. In most implementations, reading or writing a single value is an atomic operation.

An application can store arbitrary data as a set of values. Any schema information must be provided by the application. The key/value store simply retrieves or stores the value by key.

Reference:

https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/data-store-overview

Question #21

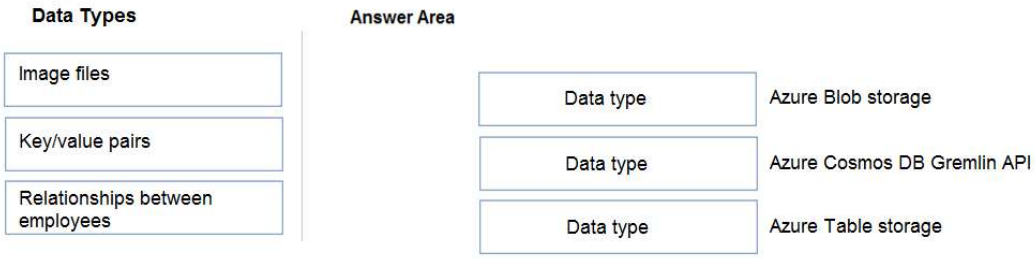
DRAG DROP -

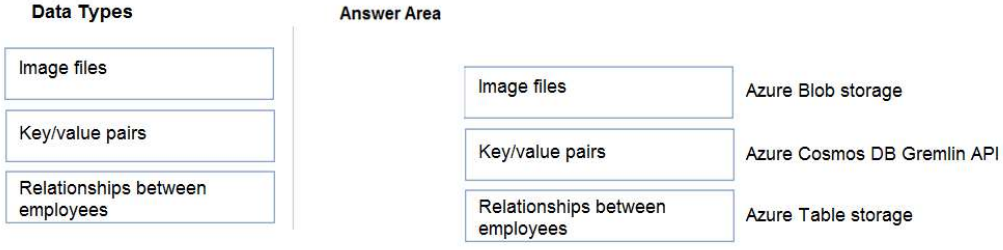
Match the types of data to the appropriate Azure data services.

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:





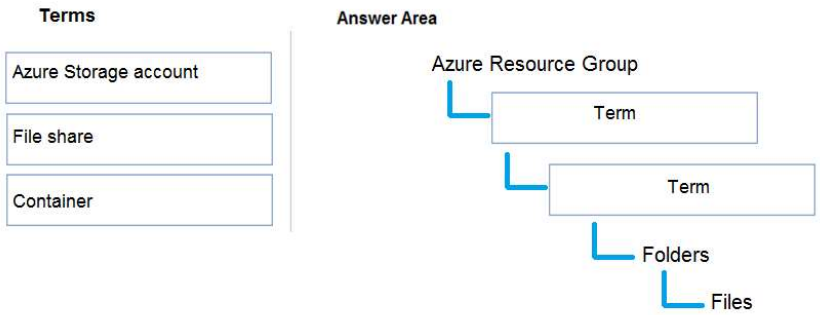
Answer:

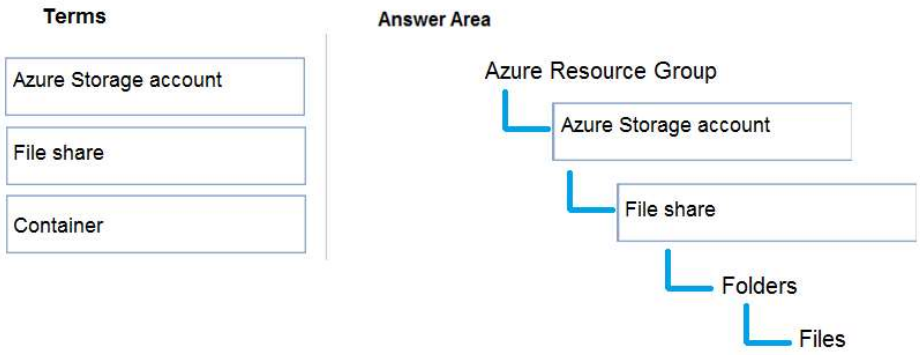
Box 1: Image files -

Azure Blob storage is suitable for image files.

Box 2:Key/value pairs -
Azure CosmosDB table API is a key-value storage hosted in the cloud.
Box 3: Relationship between employees
One-to-many relationships between business domain objects occur frequently: for example, one department has many employees.
There are several ways to implement one-to-many relationships in the Azure Table service.
Reference:
https://docs.microsoft.com/en-us/azure/storage/tables/table-storage-design-modeling
Question #22

DRAG DROP -
Match the Azure Data Lake Storage 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.
NOTE: Each correct match is worth one point.
Select and Place:





Answer:
Box 1: Azure Storage account -
Azure file shares are deployed into storage accounts, which are top-level objects that represent a shared pool of storage.

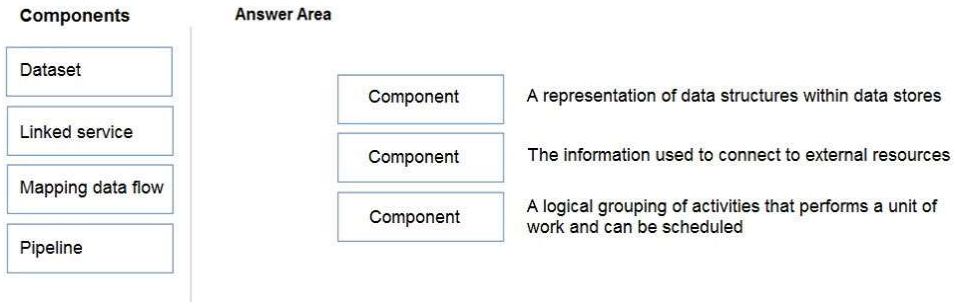
Box 2: File share -
Reference:
https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-create-file-share
Question #23

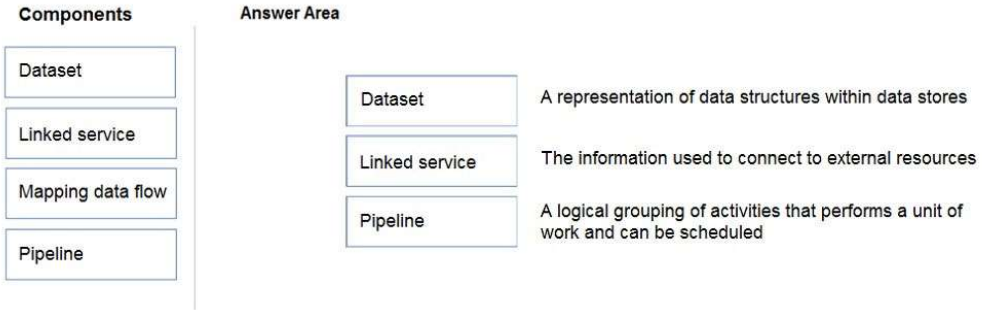
What are two characteristics of real-time data processing? Each Answer presents a complete solution.
NOTE: Each correct selection is worth one point.

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

Answer: *BD*
Real time processing deals with streams of data that are captured in real-time and processed with minimal latency to generate real-time (or near-real-time) reports or automated responses.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/big-data/real-time-processing
Question #24

DRAG DROP -
Match the Azure Data Factory components to the appropriate descriptions.
To answer, drag the appropriate component from the column on the left to its description on the right. Each component may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





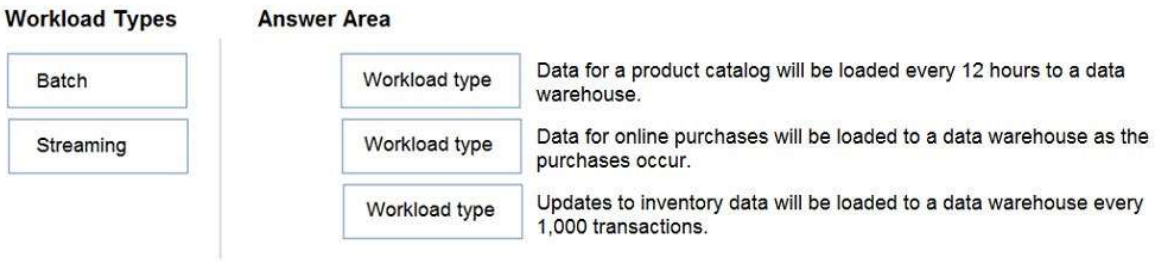
Answer:
Box 1: Dataset -
Datasets must be created from paths in Azure datastores or public web URLs, for the data to be accessible by Azure Machine Learning.

Box 2: Linked service -
Linked services are much like connection strings, which define the connection information needed for Data Factory to connect to external resources.

Box 3: Pipeline -
A pipeline is a logical grouping of activities that together perform a task.
Reference:
https://k21academy.com/microsoft-azure/dp-100/datastores-and-datasets-in-azure/ https://docs.microsoft.com/en-us/azure/data-factory/concepts-linked-services https://docs.microsoft.com/en-us/azure/data-factory/concepts-pipelines-activities
Question #25

DRAG DROP -
Match the types of workloads to the appropriate scenarios.
To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.

Select and Place:

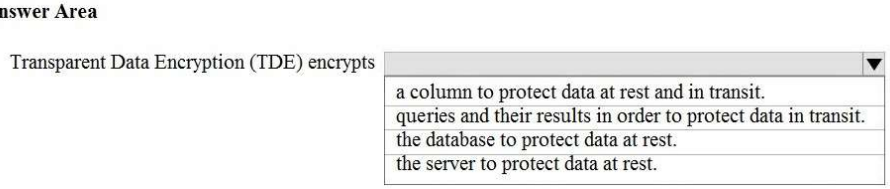


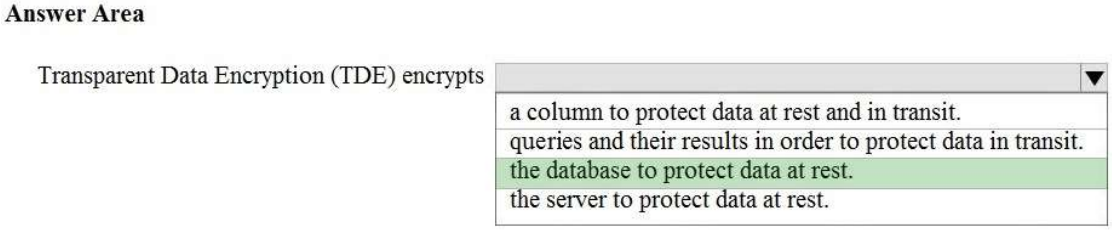
Answer:
Box 1: Batch -
Batch processing refers to the processing of blocks of data that have already been stored over a period of time.

Box 2: Streaming -
Stream processing is a big data technology that allows us to process data in real-time as they arrive and detect conditions within a small period of time from the point of receiving the data. It allows us to feed data into analytics tools as soon as they get generated and get instant analytics results.

Box 3: Batch -
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/batch-processing
Question #26

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:





Answer:
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/transparent-data-encryption-tde-overview?tabs=azure-portal
Question #27

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

Answer: *B*
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/authentication-mfa-ssms-overview
Question #28

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

Answer: *B*
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/features-comparison
Question #29

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

By default, each Azure SQL database is protected by [▼]

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

Answer Area

By default, each Azure SQL database is protected by [▼]

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

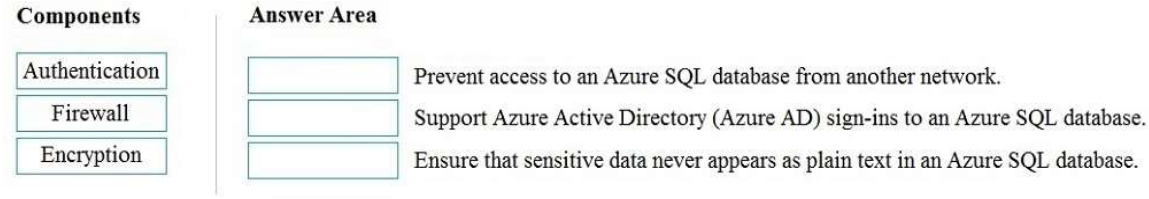
Answer:
When you create a new server in Azure SQL Database or Azure Synapse Analytics named mysqlserver, for example, a server-level firewall blocks all access to the public endpoint for the server
Reference:
https://docs.microsoft.com/en-us/azure/security/fundamentals/infrastructure-sql
Question #30

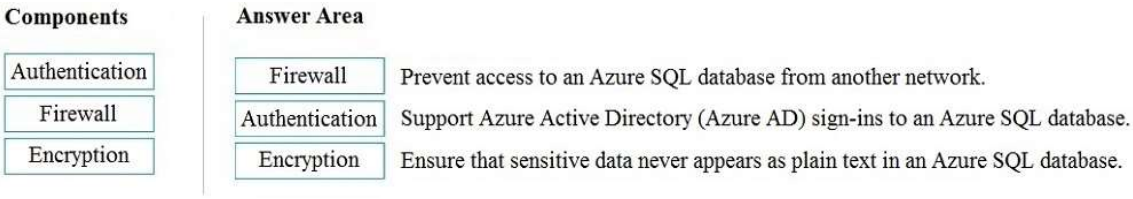
You need to design and model a database by using a graphical tool that supports project-oriented offline database development.
What should you use?

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

Answer: *A*
Reference:
https://docs.microsoft.com/en-us/sql/ssdt/project-oriented-offline-database-development?view=sql-server-ver15
Question #31

DRAG DROP -
Match the security components to the appropriate scenarios.
To answer, drag the appropriate component from the column on the left to its scenario on the right. Each component may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





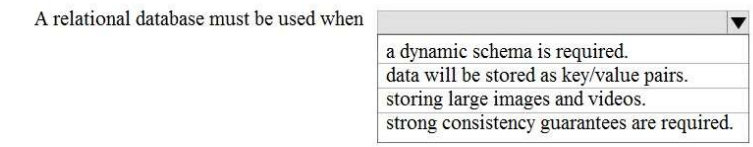
Answer:
Reference:
https://docs.microsoft.com/en-us/sql/database-engine/configure-windows/configure-a-windows-firewall-for-database-engine-access?view=sql-server-ver15 https://docs.microsoft.com/en-us/azure/azure-sql/database/authentication-aad-overview
https://docs.microsoft.com/en-us/azure/azure-sql/database/always-encrypted-certificate-store-configure
Question #32

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).

Answer: *A*
Use read-only replicas to offload read-only query workloads.
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/read-scale-out
Question #33

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:



Answer Area

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.

Answer:

Question #34

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

Relational data uses [▼] to enforce relationships between different tables.

- collections
- columns
- keys
- partitions

Answer Area

Relational data uses [▼] to enforce relationships between different tables.

- collections
- columns
- keys
- partitions

Answer:
Reference:
https://teachcomputerscience.com/relational-databases/
Question #35

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

[▼] is a virtual table that contains content defined by a query.

- A heap
- A stored procedure
- A view
- An index

Answer Area

[▼] is a virtual table that contains content defined by a query.

- A heap
- A stored procedure
- A view
- An index

Answer:
Reference:
https://docs.microsoft.com/en-us/sql/relational-databases/views/views
Question #36

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 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.

Answer: *BCE*
InAnswers:
A, D: Resource group permissions is not required to query an Azure SQL database table.
Reference:
https://docs.microsoft.com/en-us/sql/relational-databases/security/authentication-access/getting-started-with-database-engine-permissions?view=sql-server-ver15
Question #37

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

Answer: *C*
Reference:
https://docs.microsoft.com/en-us/sql/t-sql/queries/update-transact-sql?view=sql-server-ver15
Question #38

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

Answer: *B*
Reference:
https://azure.microsoft.com/en-us/services/sql-database/#features
Question #39

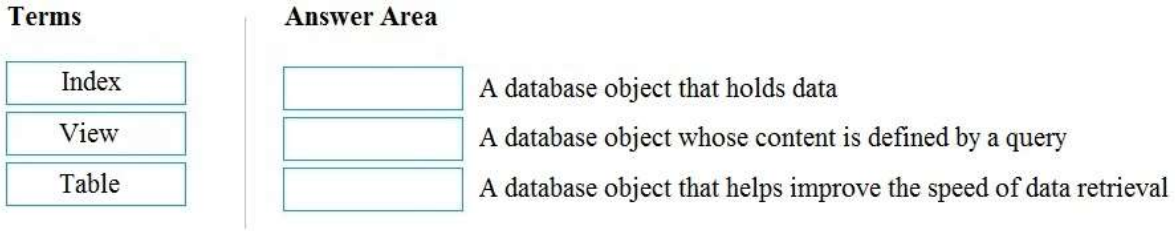
You are writing a set of SQL queries that administrators will use to troubleshoot an Azure SQL database.
You need to embed documents and query results into a SQL notebook.
What should you use?

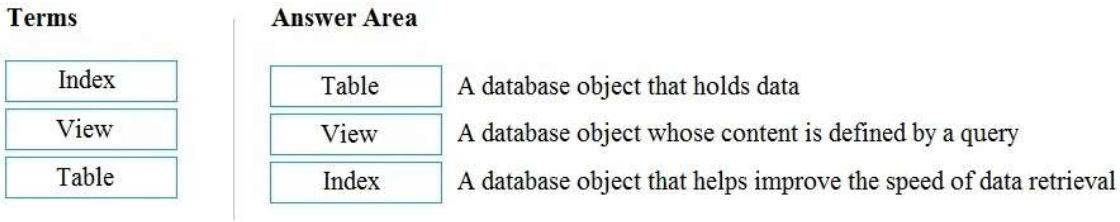
- A. Microsoft SQL Server Management Studio (SSMS)

- B. Azure Data Studio
- C. Azure CLI
- D. Azure PowerShell

Answer: *B*
Reference:
https://www.mssqltips.com/sqlservertip/5997/create-sql-server-notebooks-in-azure-data-studio/
Question #40

DRAG DROP -
Match the terms to the appropriate descriptions.
To answer, drag the appropriate term from the column on the left to its description on the right. Each term may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





Answer:
Reference:
https://en.wikipedia.org/wiki/Table_(database)#:~:text=A%20table%20is%20a%20collection,table%20format%20within%20a%20database.&text=In%20relational%20databases%2C%20and%20flat,a%20row%20and%20column%20intersect. https://en.wikipedia.org/wiki/View_(SQL) https://en.wikipedia.org/wiki/Database_index#:~:text=A%20database%20index%20is%20a,maintain%20the%20index%20data%20structure.
Question #41

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)

Answer: *D*
OLTP is designed to serve as a persistent data store for business or front-end applications. OLTP administers day to day transaction of an organization.
Reference:
https://sqlwizard.blog/2020/03/15/sql-server-oltp-vs-olap/
Question #42

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

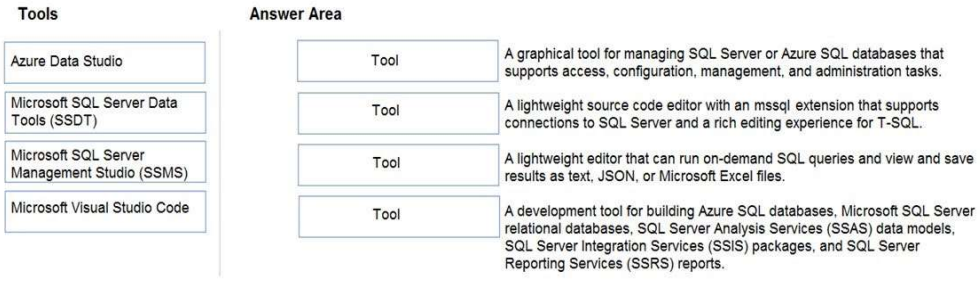
Answer: *A*
You can automate deployments and use the practice of infrastructure as code. In code, you define the infrastructure that needs to be deployed
To implement infrastructure as code for your Azure solutions, use Azure Resource Manager templates (ARM templates). The template is a JavaScript Object
Notation (JSON) file that defines the infrastructure and configuration for your project. The template uses declarative syntax, which lets you state what you intend to deploy without having to write the sequence of programming commands to create it. In the template, you specify the resources to deploy and the properties for those resources.
Reference:
https://docs.microsoft.com/en-us/azure/azure-resource-manager/templates/overview
Question #43

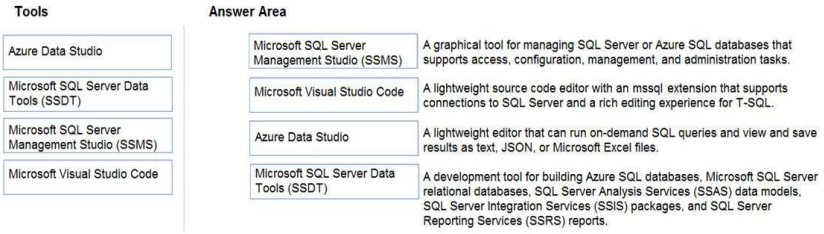
You have an Azure SQL database that you access directly from the Internet.
You recently changed your external IP address.
After changing the IP address, you can no longer access the database. You can connect to other resources in Azure.
What is a possible cause of the issue?

- A. role-based access control (RBAC)
- B. Dynamic Host Configuration Protocol (DHCP)
- C. Domain Name Service (DNS)
- D. a database-level firewall

Answer: *D*
The Azure SQL Database firewall lets you decide which IP addresses may or may not have access to either your Azure SQL Server or your Azure SQL database.
When creating an Azure SQL Database, the firewall needs to be configured before anyone will be able to access the database. By default, no external access to your SQL Database will be allowed until you explicitly assign permission by creating a firewall rule.
Reference:
https://www.sqlshack.com/configuring-the-azure-sql-database-firewall/
Question #44

DRAG DROP -
Match the tools to the appropriate descriptions.
To answer, drag the appropriate tool from the column on the left to its description on the right. Each tool may be used once, more than once, or not at all.
Select and Place:





Answer:

Box 1: Microsoft SQL Server Management Studio (SSMS)

SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure, from SQL Server to Azure SQL Database.

Box 2: Microsoft Visual Studio Code

Visual Studio Code is a streamlined code editor with support for development operations like debugging, task running, and version control. It aims to provide just the tools a developer needs for a quick code-build-debug cycle and leaves more complex workflows to fuller featured IDEs, such as Visual Studio IDE.

Box 3: Azure Data Studio -

Azure Data Studio offers a modern, keyboard-focused SQL coding experience that makes your everyday tasks easier with built-in features, such as multiple tab windows, a rich SQL editor, IntelliSense, keyword completion, code snippets, code navigation, and source control integration (Git). Run on-demand SQL queries, view and save results as text, JSON, or Excel. Edit data, organize your favorite database connections, and browse database objects in a familiar object browsing experience.

Box 4: Microsoft SQL Server Data Tools (SSDT)

SQL Server Data Tools (SSDT) is a modern development tool for building SQL Server relational databases, databases in Azure SQL, Analysis Services (AS) data models, Integration Services (IS) packages, and Reporting Services (RS) reports. With SSDT, you can design and deploy any SQL Server content type with the same ease as you would develop an application in Visual Studio.

Reference:

https://docs.microsoft.com/en-us/sql/ssms/download-sql-server-management-studio-ssms

https://code.visualstudio.com/docs/supporting/FAQ https://docs.microsoft.com/en-us/sql/azure-data-studio/what-is-azure-data-studio https://docs.microsoft.com/en-us/sql/ssdt/download-sql-server-data-tools-ssdt

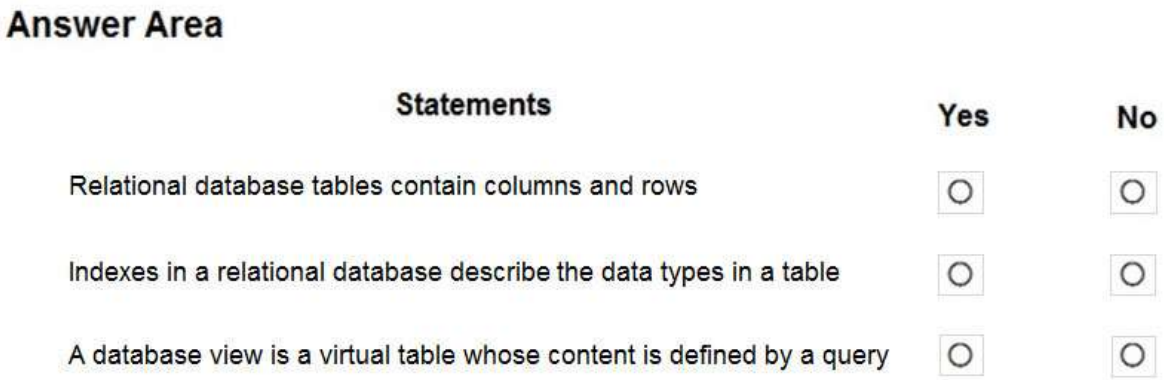
Question #45

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:



Answer:

Answer Area

Statements	Yes	No
Relational database tables contain columns and rows	○	○
Indexes in a relational database describe the data types in a table	○	○
A database view is a virtual table whose content is defined by a query	○	○

Box 1: Yes -
Tables are database objects that contain all the data in a database. In tables, data is logically organized in a row-and-column format similar to a spreadsheet.
Each row represents a unique record, and each column represents a field in the record.

Box 2: No -
An index is an on-disk structure associated with a table or view that speeds retrieval of rows from the table or view.

Box 3: Yes -
A view is a virtual table whose contents are defined by a query. Like a table, a view consists of a set of named columns and rows of data.
Reference:
https://docs.microsoft.com/en-us/sql/relational-databases/tables/tables https://docs.microsoft.com/en-us/sql/relational-databases/indexes/clustered-and-nonclustered-indexes-described https://docs.microsoft.com/en-us/sql/relational-databases/views/views?view=sql-server-ver15
Question #46

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

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

Answer: *A*
The sqlcmd utility lets you enter Transact-SQL statements, system procedures, and script files at the command prompt.
InAnswers:
B: The bulk copy program utility (bcp) bulk copies data between an instance of Microsoft SQL Server and a data file in a user-specified format.
D: The Azure CLI is the defacto tool for cross-platform and command-line tools for building and managing Azure resources.
Reference:
https://docs.microsoft.com/en-us/sql/tools/overview-sql-tools?view=sql-server-ver15
Question #47

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
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).	○	○

Answer Area

Statements	Yes	No
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).	○	○

Answer:

Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview https://azure.microsoft.com/en-us/blog/announcing-sql-atp-and-sql-vulnerability-assessment-general-availability/

Question #48

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You can use Azure Data Studio to query a Microsoft SQL Server big data cluster.	○	○
You can use Microsoft SQL Server Management Studio (SSMS) to query an Azure Synapse Analytics data warehouse.	○	○
You can use MySQL Workbench to query Azure Database for MariaDB databases.	○	○

Answer Area

Statements	Yes	No
You can use Azure Data Studio to query a Microsoft SQL Server big data cluster.	○	○
You can use Microsoft SQL Server Management Studio (SSMS) to query an Azure Synapse Analytics data warehouse.	○	○
You can use MySQL Workbench to query Azure Database for MariaDB databases.	○	○

Answer:

Reference:
https://docs.microsoft.com/en-us/sql/big-data-cluster/connect-to-big-data-cluster?view=sql-server-ver15
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-query-ssms
https://docs.microsoft.com/en-us/azure/mariadb/connect-workbench

Question #49

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Platform as a service (PaaS) database offerings in Azure provide built-in high availability.	○	○
Platform as a service (PaaS) database offerings in Azure provide configurable scaling options.	○	○
Platform as a service (PaaS) database offerings in Azure reduce the administrative overhead for managing hardware.	○	○

Answer Area

Statements	Yes	No
Platform as a service (PaaS) database offerings in Azure provide built-in high availability.	○	○
Platform as a service (PaaS) database offerings in Azure provide configurable scaling options.	○	○
Platform as a service (PaaS) database offerings in Azure reduce the administrative overhead for managing hardware.	○	○

Answer:

Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview

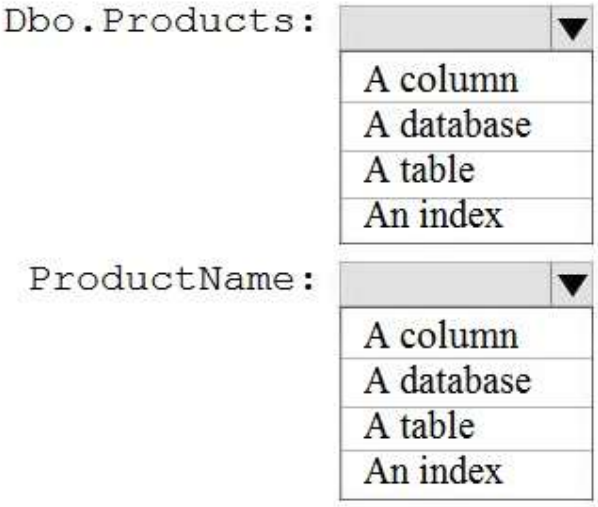
Question #50

HOTSPOT -
You have the following SQL query.

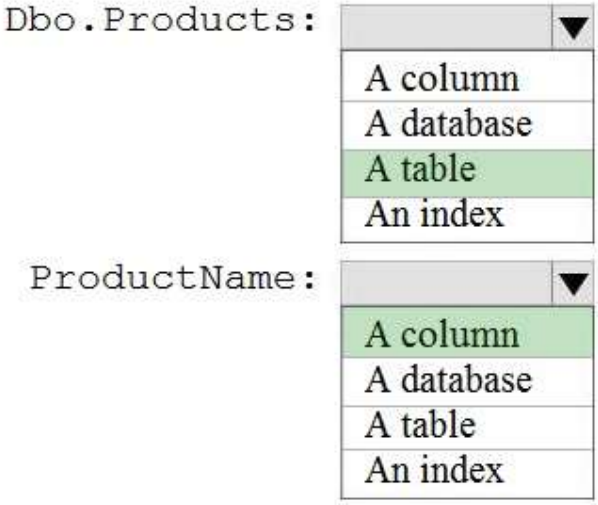
```
INSERT INTO dbo.Products (ProductID, ProductName, Price, ProductDescription)
    VALUES (1, 'Clamp', 12.48, 'Workbench clamp') ;
```

What are dbo.Products and ProductName? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area



Answer Area



Answer:

Question #51

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
You must apply patches to Azure SQL databases regularly.	○	○
You need a Microsoft 365 subscription to create an Azure SQL database.	○	○
You can use existing Microsoft SQL Server licenses to reduce the cost of Azure SQL databases.	○	○

Answer:

Answer Area

Statements	Yes	No
You must apply patches to Azure SQL databases regularly.	○	○
You need a Microsoft 365 subscription to create an Azure SQL database.	○	○
You can use existing Microsoft SQL Server licenses to reduce the cost of Azure SQL databases.	○	○

Reference:
https://azure.microsoft.com/en-gb/blog/hot-patching-sql-server-engine-in-azure-sql-database/ https://azure.microsoft.com/en-us/services/sql-database/#product-overview

Question #52

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

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

Answer: *D*

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

Question #53

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Azure Data Studio can be used to query an Azure SQL database from a device that runs macOS.	○	○
Microsoft SQL Server Management Studio (SSMS) enables users to create and use SQL notebooks.	○	○
Azure Data Studio can be used to restore a database.	○	○

Answer:

Answer Area

Statements	Yes	No
Azure Data Studio can be used to query an Azure SQL database from a device that runs macOS.	○	○
Microsoft SQL Server Management Studio (SSMS) enables users to create and use SQL notebooks.	○	○
Azure Data Studio can be used to restore a database.	○	○

Box 1: Yes -
Azure Data Studio is a cross-platform database tool for data professionals using on-premises and cloud data platforms on Windows, macOS, and Linux.
You can use Azure Data Studio to connect to an Azure SQL Database server. You'll then run Transact-SQL (T-SQL) statements to create and query Azure SQL databases.

Box 2: No -
SQL Server Management Studio is for configuring, managing, and administering all components within Microsoft SQL Server, not to create SQL notebooks.
Instead use Azure Data Studio to create SQL notebook.

Box 3: Yes -
You can use the Azure Data Studio to restore databases.
Reference:
https://docs.microsoft.com/en-us/sql/azure-data-studio/what-is-azure-data-studio
Question #54

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

Answer: *C*
Azure SQL Database is relational database and a managed service.
InAnswers:
A, B: Cosmos DB, HDInsight are non-relational databases.
D: Azure Synapse Analytics is for data warehousing, not for Online Transaction Processing
Reference:
https://cloud.netapp.com/blog/azure-cvo-blg-azure-database-review-your-guide-for-database-assessment
Question #55

What are two benefits of platform as a service (PaaS) relational database offerings in Azure, such as Azure SQL Database? Each 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

Answer: *AD*
A: Azure SQL Database is a fully managed platform as a service (PaaS) database engine that handles most of the database management functions such as upgrading, patching, backups, and monitoring without user involvement.
D: SQL Database delivers predictable performance with multiple resource types, service tiers, and compute sizes. It provides dynamic scalability with no downtime, built-in intelligent optimization, global scalability and availability, and advanced security options. These capabilities allow you to focus on rapid app development and accelerating your time-to-market, rather than on managing virtual machines and infrastructure.
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview
Question #56

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
If you have a platform as a service (PaaS) database in Azure, you are responsible for applying operating system updates.	○	○
If you have a platform as a service (PaaS) database in Azure, backups are performed automatically.	○	○
If you have a platform as a service (PaaS) database in Azure, you are responsible for upgrading the database engine.	○	○

Answer Area

Statements	Yes	No
If you have a platform as a service (PaaS) database in Azure, you are responsible for applying operating system updates.	○	○
If you have a platform as a service (PaaS) database in Azure, backups are performed automatically.	○	○
If you have a platform as a service (PaaS) database in Azure, you are responsible for upgrading the database engine.	○	○

Answer:
Box 1: No -
Microsoft handles all patching and updating of the SQL and operating system code. You don't have to manage the underlying infrastructure.

Box 2: Yes -
SQL Database is a fully managed service that has built-in high availability, backups, and other common maintenance operations.

Box 3: No -
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/sql-database-paas-overview
Question #57

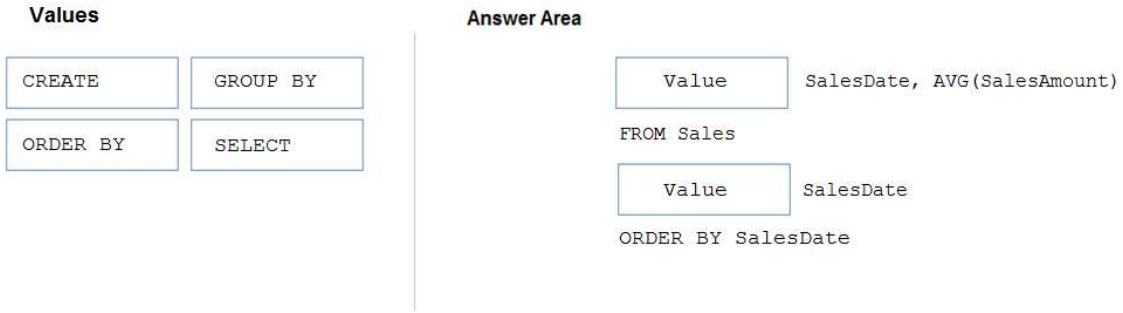
DRAG DROP -
You have a table named Sales that contains the following data.

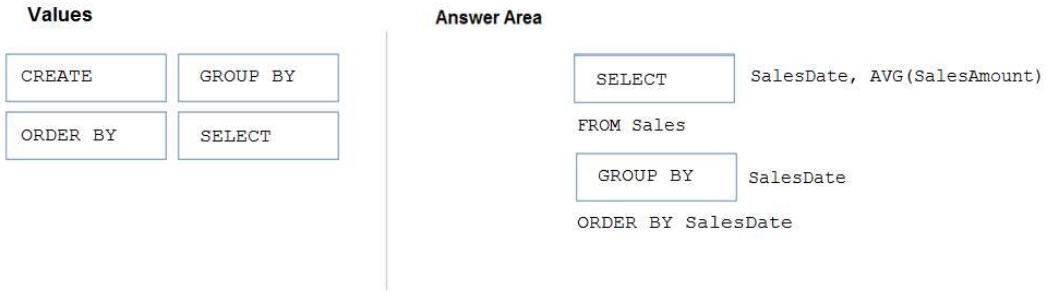
SalesDate	SalesAmount	ProductID
4-Apr-20	$2,000	1
5-Apr-20	$40	2
5-Apr-20	$2,300	1
6-Apr-20	$40	3
6-Apr-20	$200	4

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:





Answer:
Box 1: SELECT -

Box 2: GROUP BY -
Example:
When used with a GROUP BY clause, each aggregate function produces a single value covering each group, instead of a single value covering the whole table.
The following example produces summary values for each sales territory in the AdventureWorks2012 database. The summary lists the average bonus received by the sales people in each territory, and the sum of year-to-date sales for each territory.
SELECT TerritoryID, AVG(Bonus)as 'Average bonus', SUM(SalesYTD) as 'YTD sales'

FROM Sales.SalesPerson -
GROUP BY TerritoryID;
Reference:
https://docs.microsoft.com/en-us/sql/t-sql/functions/avg-transact-sql
Question #58

When you create an Azure SQL database, which account can always connect to the database?

- A. the Azure Active Directory (Azure AD) account that created the database
- B. the server admin login account of the logical server
- C. the Azure Active Directory (Azure AD) administrator account
- D. the sa account

Answer: *B*
When you first deploy Azure SQL, you specify an admin login and an associated password for that login. This administrative account is called Server admin.
Reference:
https://docs.microsoft.com/en-us/azure/azure-sql/database/single-database-create-quickstart
Question #59

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

Answer: *C*
Azure file shares can be mounted concurrently by cloud or on-premises deployments of Windows, Linux, and macOS. Azure file shares can also be cached on
Windows Servers with Azure File Sync for fast access near where the data is being used.
Reference:
https://azure.microsoft.com/en-us/services/storage/files/
Question #60

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

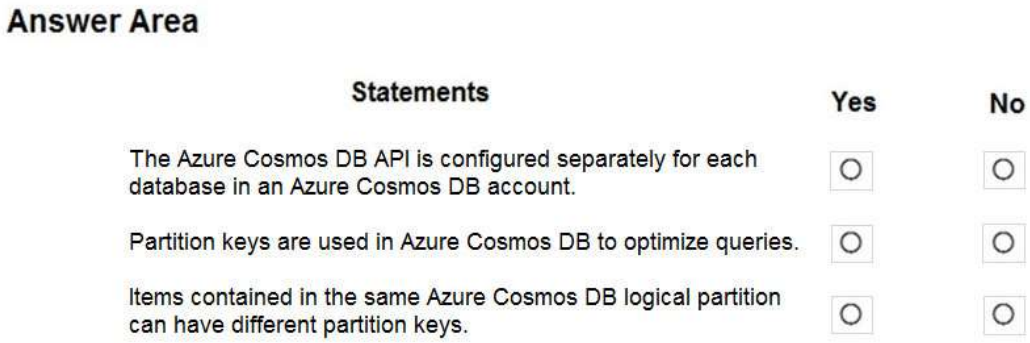
Answer: *C*
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/technology-choices/analytical-data-stores
Question #61

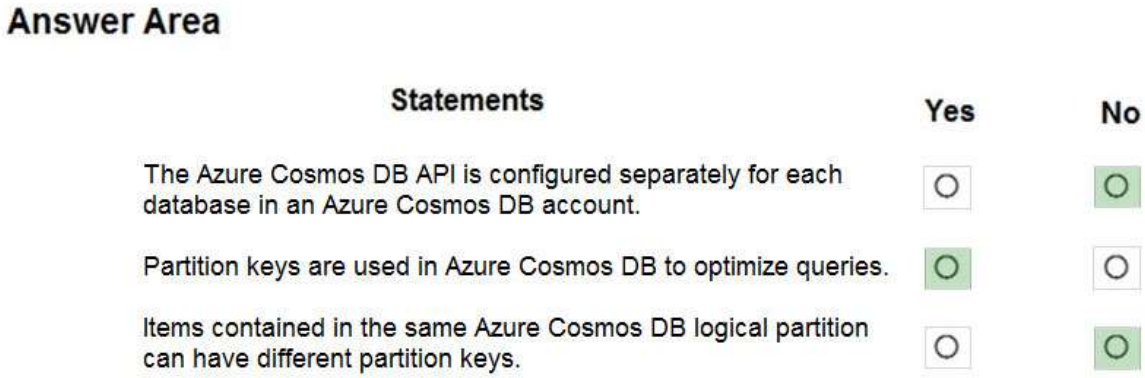
You have an application that runs on Windows and requires access to a mapped drive.
Which Azure service should you use?

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

Answer: *A*
Azure Files is Microsoft's easy-to-use cloud file system. Azure file shares can be seamlessly used in Windows and Windows Server.
To use an Azure file share with Windows, you must either mount it, which means assigning it a drive letter or mount point path, or access it via its UNC path.
Reference:
https://docs.microsoft.com/en-us/azure/storage/files/storage-how-to-use-files-windows
Question #62

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:





Answer:
Box 1: No -
The API determines the type of account to create. Azure Cosmos DB provides five APIs: Core (SQL) and MongoDB for document data, Gremlin for graph data,
Azure Table, and Cassandra. Currently, you must create a separate account for each API.

Box 2: Yes -
Azure Cosmos DB uses partitioning to scale individual containers in a database to meet the performance needs of your application. In partitioning, the items in a container are divided into distinct subsets called logical partitions. Logical partitions are formed based on the value of a partition key that is associated with each item in a container.

Box 3: No -
Logical partitions are formed based on the value of a partition key that is associated with each item in a container.
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/partitioning-overview
Question #63

Your company is designing an application that will write a high volume of JSON data and will have an application-defined schema.
Which type of data store should you use?

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

- D. graph

Answer: *B*
A key/value store associates each data value with a unique key.
An application can store arbitrary data as a set of values. Any schema information must be provided by the application. The key/value store simply retrieves or stores the value by key.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/data-store-overview
Question #64

You need to recommend a non-relational data store that is optimized for storing and retrieving text files, videos, audio streams, and virtual disk images. The data store must store data, some metadata, and a unique ID for each file.
Which type of data store should you recommend?

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

Answer: *C*
Object storage is optimized for storing and retrieving large binary objects (images, files, video and audio streams, large application data objects and documents, virtual machine disk images). Large data files are also popularly used in this model, for example, delimiter file (CSV), parquet, and ORC. Object stores can manage extremely large amounts of unstructured data.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/data-store-overview
Question #69

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Azure Table storage supports multiple read replicas.	○	○
Azure Table storage supports multiple write regions.	○	○
The Azure Cosmos DB Table API supports multiple read replicas.	○	○
The Azure Cosmos DB Table API supports multiple write regions.	○	○

Answer Area

Statements	Yes	No
Azure Table storage supports multiple read replicas.	○	○
Azure Table storage supports multiple write regions.	○	○
The Azure Cosmos DB Table API supports multiple read replicas.	○	○
The Azure Cosmos DB Table API supports multiple write regions.	○	○

Answer:
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability
Question #70

DRAG DROP -
Match the types of data stores to the appropriate scenarios.
To answer, drag the appropriate data store type from the column on the left to its scenario on the right. Each data store type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:

Data Store Types	Answer Area	
Graph		Application users and their default language
Object		Medical images and their associated metadata
Key/value		Employee data that shows the relationships between employees

Data Store Types	Answer Area	
Graph	Key/value	Application users and their default language
Object	Object	Medical images and their associated metadata
Key/value	Graph	Employee data that shows the relationships between employees

Answer:
Reference:
https://docs.microsoft.com/en-us/azure/architecture/guide/technology-choices/data-store-overview
Question #71

You have an Azure Cosmos DB account that uses the Core (SQL) API.
Which two settings can you configure at the container level? Each 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

Answer: *AC*
Reference:
https://www.sqlshack.com/start-your-journey-with-azure-cosmos-db/
Question #72

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

Answer: *D*
Question #73

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

Answer: *B*
Reference:
https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-access-control
Question #74

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

Answer: *A*
Reference:
https://cloud.netapp.com/blog/azure-blob-storage-pricing-the-complete-guide-azure-cvo-blg#H1_4
Question #75

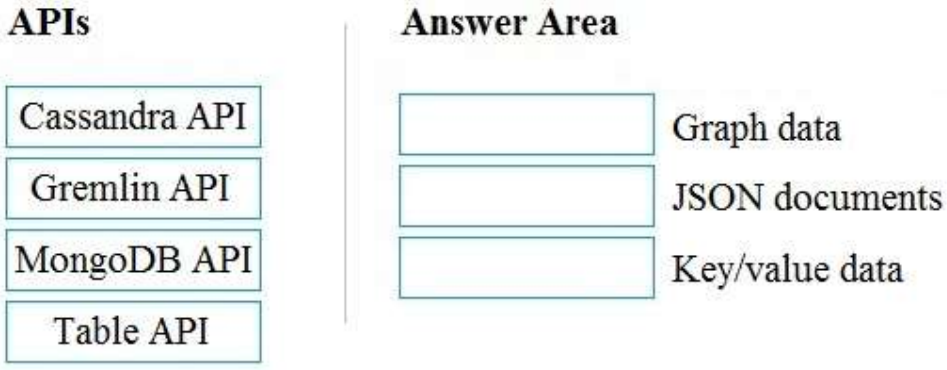
Which type of non-relational data store supports a flexible schema, stores data as JSON files, and stores the all the data for an entity in the same document?

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

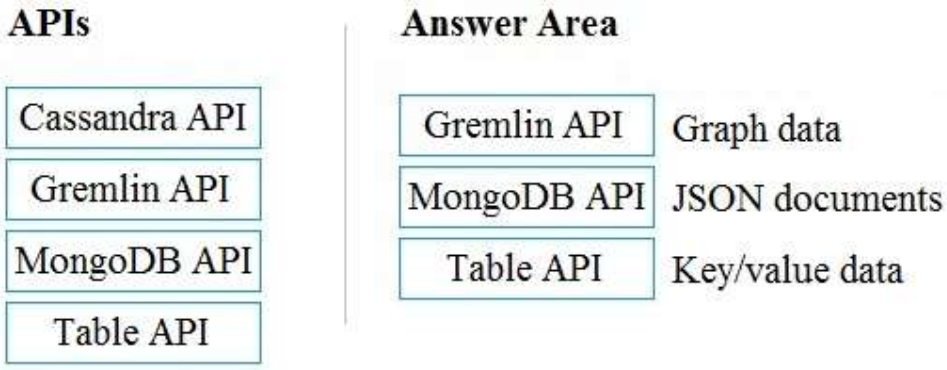
Answer: *A*

Question #76

DRAG DROP -
Match the Azure Cosmos DB APIs to the appropriate data structures.
To answer, drag the appropriate API from the column on the left to its data structure on the right. Each API may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:



Answer:



Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/faq
Question #77

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

To configure an Azure Storage account to support both security at the folder level and atomic directory manipulation, [▼]

- enable the hierarchical namespace.
- set Account kind to BlobStorage.
- set Performance to Premium.
- set Replication to Read-access geo-redundant storage (RA-GRS).

Answer Area

To configure an Azure Storage account to support both security at the folder level and atomic directory manipulation, [▼]

- enable the hierarchical namespace.
- set Account kind to BlobStorage.
- set Performance to Premium.
- set Replication to Read-access geo-redundant storage (RA-GRS).

Answer:

Reference:
https://docs.microsoft.com/en-us/azure/storage/blobs/data-lake-storage-namespace

Question #78

HOTSPOT -

To complete the sentence, select the appropriate option in the answer area.

Hot Area:

Answer Area

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.

Answer Area

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.

Answer:

Reference:
https://www.sqlshack.com/graph-database-implementation-with-azure-cosmos-db-using-the-api/

Question #79

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

Answer: *B*

With Availability Zone (AZ) support, Azure Cosmos DB will ensure replicas are placed across multiple zones within a given region to provide high availability and resiliency to zonal failures.

Note: Azure Cosmos DB provides high availability in two primary ways. First, Azure Cosmos DB replicates data across regions configured within a Cosmos account. Second, Azure Cosmos DB maintains 4 replicas of data within a region.

Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/high-availability
Question #80

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

Answer: *D*
Multi-master support for Azure Cosmos DB is now available in all public regions.
Azure CosmosDB table API is a key-value storage hosted in the cloud. It's a part of Azure Cosmos DB, that is Microsoft's multi-model database.
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/table-support
Question #81

Your company needs to design a database that shows 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

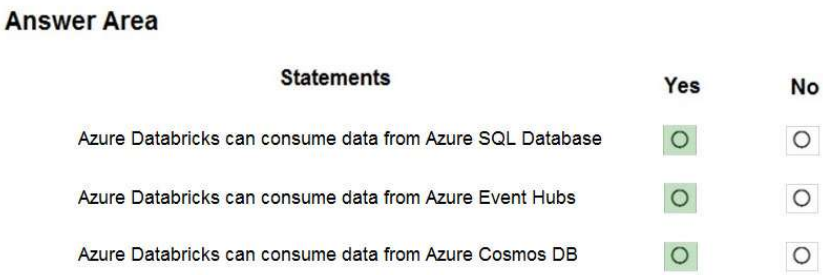
Answer: *A*
Data as it appears in the real world is naturally connected. Traditional data modeling focuses on defining entities separately and computing their relationships at runtime. While this model has its advantages, highly connected data can be challenging to manage under its constraints.
A graph database approach relies on persisting relationships in the storage layer instead, which leads to highly efficient graph retrieval operations. Azure Cosmos
DB's Gremlin API supports the property graph model.
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/graph-introduction#introduction-to-graph-databases
Question #82

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Azure Databricks can consume data from Azure SQL Database	○	○
Azure Databricks can consume data from Azure Event Hubs	○	○
Azure Databricks can consume data from Azure Cosmos DB	○	○

Answer:

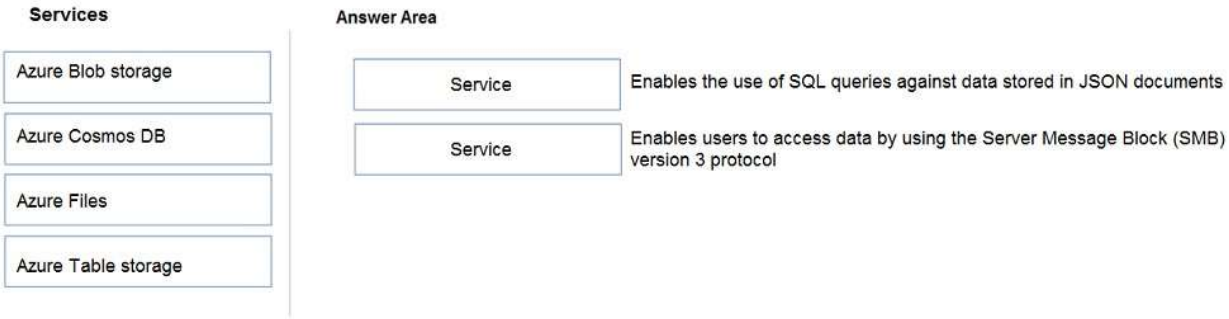


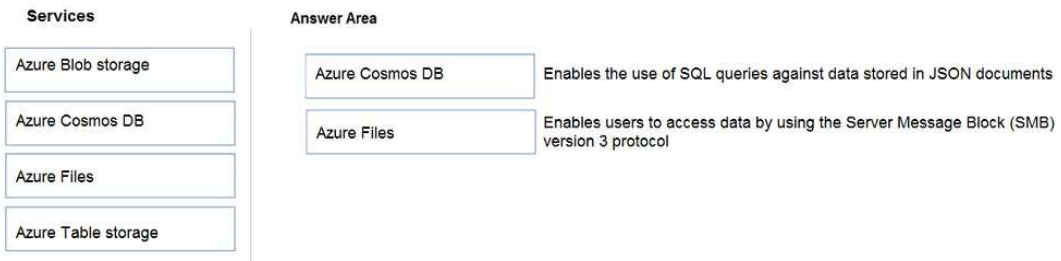
Box 1: Yes -
Azure Databricks can consume data from SQL Databases using JDBC and from SQL Databases using the Apache Spark connector.
The Apache Spark connector for Azure SQL Database and SQL Server enables these databases to act as input data sources and output data sinks for Apache
Spark jobs.

Box 2: Yes -
You can stream data into Azure Databricks using Event Hubs.

Box 3: Yes -
You can run Spark jobs with data stored in Azure Cosmos DB using the Cosmos DB Spark connector. Cosmos can be used for batch and stream processing, and as a serving layer for low latency access.
You can use the connector with Azure Databricks or Azure HDInsight, which provide managed Spark clusters on Azure.
Reference:
https://docs.microsoft.com/en-us/azure/databricks/data/data-sources/sql-databases-azure https://docs.microsoft.com/en-us/azure/databricks/scenarios/databricks-stream-from-eventhubs
Question #83

DRAG DROP -
Match the datastore services to the appropriate descriptions.
To answer, drag the appropriate service from the column on the left to its description on the right. Each service may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





Answer:
Box 1: Azure Cosmos DB -
In Azure Cosmos DB's SQL (Core) API, items are stored as JSON. The type system and expressions are restricted to deal only with JSON types.

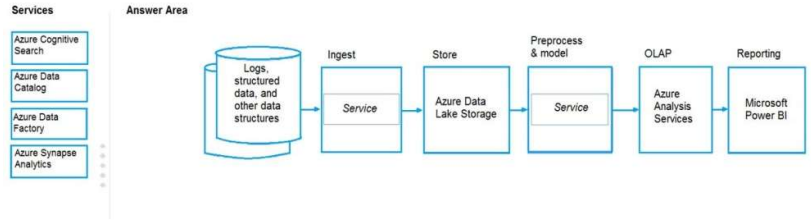
Box 2: Azure Files -
Azure Files offers native cloud file sharing services based on the SMB protocol.
Reference:
https://docs.microsoft.com/en-us/azure/cosmos-db/sql-query-working-with-json https://cloud.netapp.com/blog/azure-smb-server-message-block-in-the-cloud-for-azure-files
Question #84

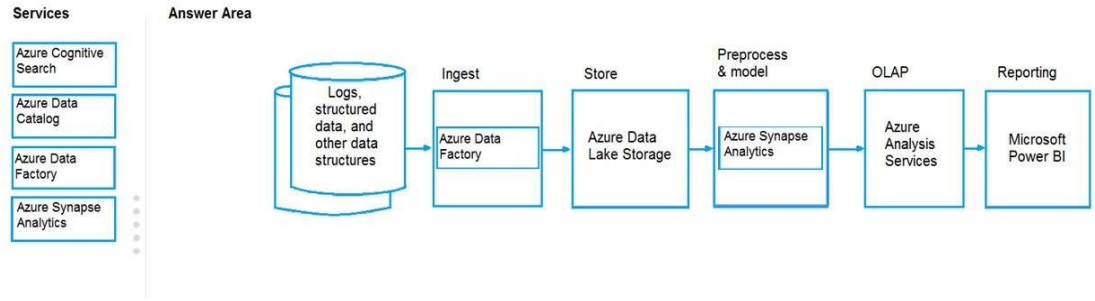
You need to use Transact-SQL to query files in Azure Data Lake Storage from an Azure Synapse Analytics data warehouse.
What should you use to query the files?

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

Answer: *C*
Reference:
https://docs.databricks.com/data/data-sources/azure/synapse-analytics.html
Question #85

DRAG DROP -
Match the Azure services to the appropriate locations in the architecture.
To answer, drag the appropriate service from the column on the left to its location on the right. Each service may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:

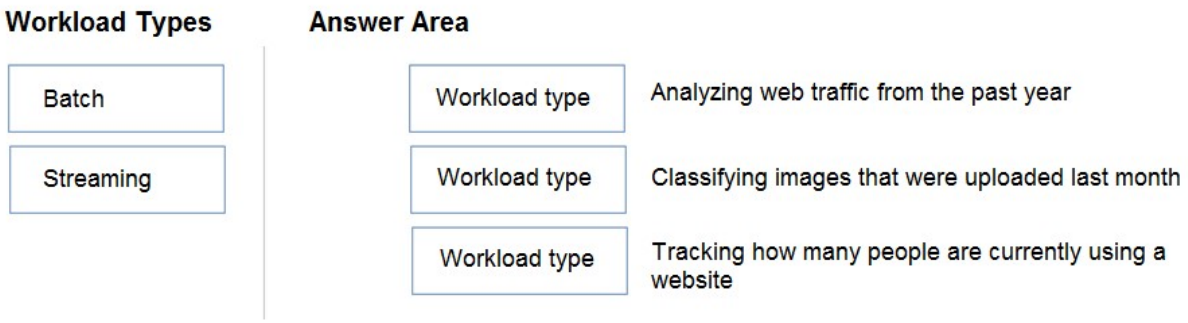


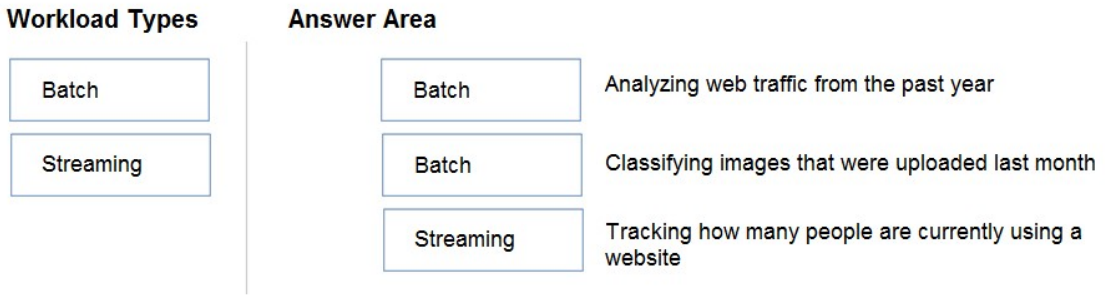


Answer:
Box Ingest: Azure Data Factory -
You can build a data ingestion pipeline with Azure Data Factory (ADF).
Box Preprocess & model: Azure Synapse Analytics
Use Azure Synapse Analytics to preprocess data and deploy machine learning models.
Reference:
https://docs.microsoft.com/en-us/azure/machine-learning/how-to-data-ingest-adf https://docs.microsoft.com/en-us/azure/machine-learning/team-data-science-process/sqldw-walkthrough
Question #86

DRAG DROP -
Match the types of workloads to the appropriate scenarios.
To answer, drag the appropriate workload type from the column on the left to its scenario on the right. Each workload type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.

Select and Place:



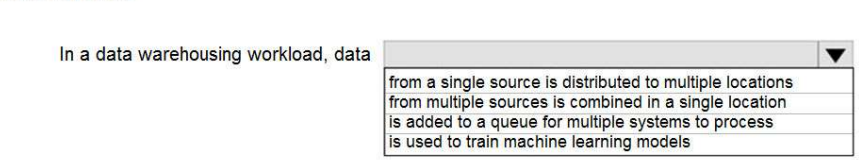


Answer:
Box 1: Batch -
The batch processing model requires a set of data that is collected over time while the stream processing model requires data to be fed into an analytics tool, often in micro-batches, and in real-time.
The batch Processing model handles a large batch of data while the Stream processing model handles individual records or micro-batches of few records.
In Batch Processing, it processes over all or most of the data but in Stream Processing, it processes over data on a rolling window or most recent record.

Box 2: Batch -

Box 3: Streaming -
Reference:
https://k21academy.com/microsoft-azure/dp-200/batch-processing-vs-stream-processing
Question #87

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:



Answer Area

In a data warehousing workload, data [▼]

- from a single source is distributed to multiple locations
- from multiple sources is combined in a single location
- is added to a queue for multiple systems to process
- is used to train machine learning models

Answer:
Note: The data warehouse workload encompasses:
The entire process of loading data into the warehouse
▪
➠ Performing data warehouse analysis and reporting
➠ Managing data in the data warehouse
➠ Exporting data from the data warehouse
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-workload-management
Question #88

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
A pipeline is a representation of a data structure within Azure Data Factory	○	○
Azure Data Factory pipelines can execute other pipelines	○	○
A processing step within an Azure Data Factory pipeline is an activity	○	○

Answer Area

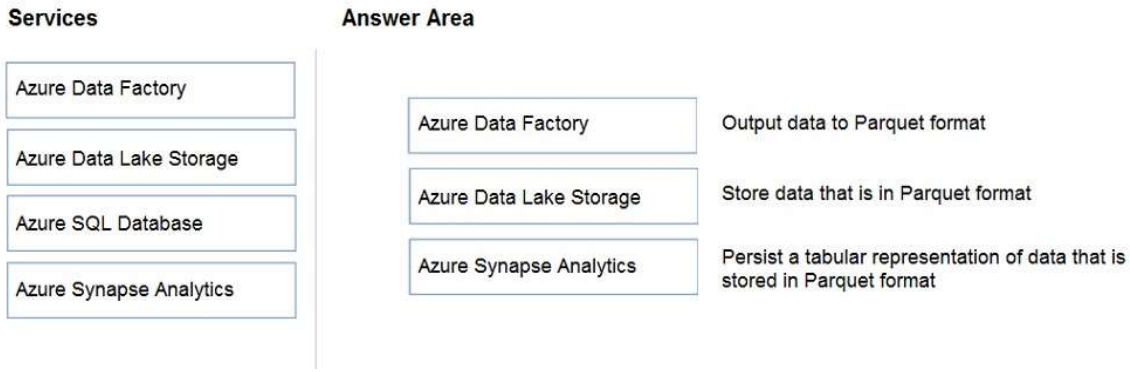
Statements	Yes	No
A pipeline is a representation of a data structure within Azure Data Factory	○	○
Azure Data Factory pipelines can execute other pipelines	○	○
A processing step within an Azure Data Factory pipeline is an activity	○	○

Answer:
Box 1: No -
A pipeline is a logical grouping of activities that together perform a task.

Box 2: Yes -
You can construct pipeline hierarchies with data factory.

Box 3: Yes -
A pipeline is a logical grouping of activities that together perform a task.
Reference:
https://mrpaulandrew.com/2019/09/25/azure-data-factory-pipeline-hierarchies-generation-control/
Question #89

DRAG DROP -
Match the Azure services to the appropriate requirements.
To answer, drag the appropriate service from the column on the left to its requirement on the right. Each service may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:

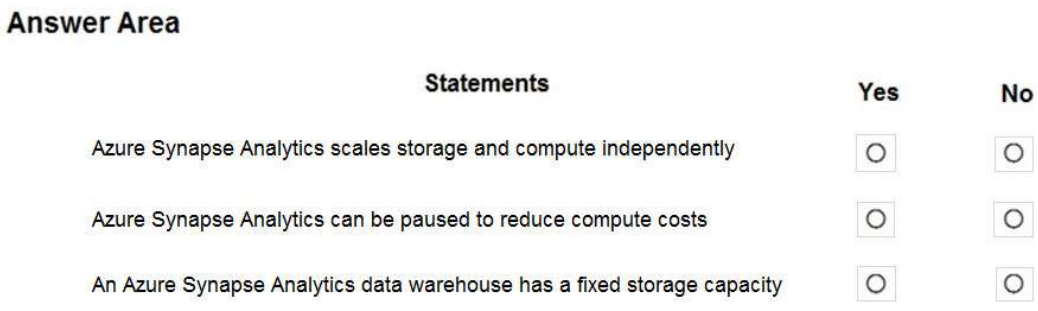


Answer:
Box 1: Azure Data Factory -

Box 2: Azure Data Lake Storage -
Azure Data Lake Storage (ADLA) now natively supports Parquet files. ADLA adds a public preview of the native extractor and outputter for the popular Parquet file format

Box 3: Azure Synapse Analytics -
Use Azure Synapse Analytics Workspaces.
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/supported-file-formats-and-compression-codecs
Question #90

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:



Answer:

Answer Area

Statements	Yes	No
Azure Synapse Analytics scales storage and compute independently	○	○
Azure Synapse Analytics can be paused to reduce compute costs	○	○
An Azure Synapse Analytics data warehouse has a fixed storage capacity	○	○

Box 1: Yes -
Compute is separate from storage, which enables you to scale compute independently of the data in your system.

Box 2: Yes -
You can use the Azure portal to pause and resume the dedicated SQL pool compute resources.
Pausing the data warehouse pauses compute. If your data warehouse was paused for the entire hour, you will not be charged compute during that hour.

Box 3: No -
Storage is sold in 1 TB allocations. If you grow beyond 1 TB of storage, your storage account will automatically grow to 2 TBs.
Reference:
https://azure.microsoft.com/en-us/pricing/details/synapse-analytics/
Question #91

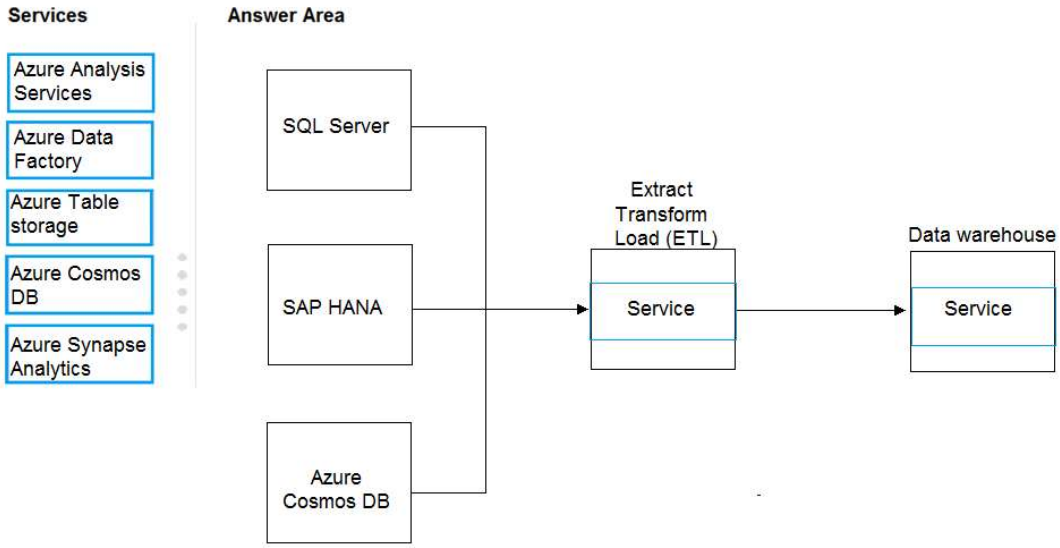
What should you use to build a Microsoft Power BI paginated report?

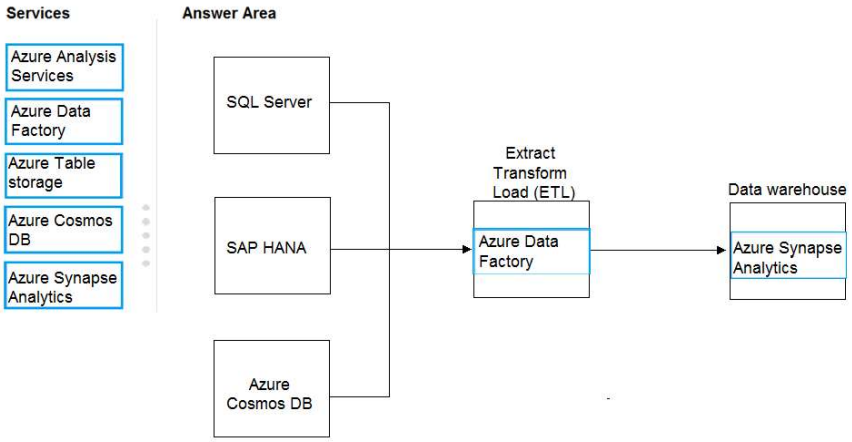
- A. Charticulator
- B. Power BI Desktop
- C. the Power BI service
- D. Power BI Report Builder

Answer: *D*
Power BI Report Builder is the standalone tool for authoring paginated reports for the Power BI service.
Reference:
https://docs.microsoft.com/en-us/power-bi/paginated-reports/paginated-reports-report-builder-power-bi
Question #92

DRAG DROP -
Match the Azure services to the appropriate locations in the architecture.
To answer, drag the appropriate service from the column on the left to its location on the right. Each service may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.

Select and Place:





Answer:

Box 1: Azure Data factory -

Relevant Azure service for the three ETL phases are Azure Data Factory and SQL Server Integration Services (SSIS).

Box 2: Azure Synapse Analytics -

You can copy and transform data in Azure Synapse Analytics by using Azure Data Factory

Note: Azure Synapse Analytics connector is supported for the following activities:

- Copy activity with supported source/sink matrix table
- Mapping data flow
- Lookup activity
- GetMetadata activity

Reference:

https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/etl https://docs.microsoft.com/en-us/azure/data-factory/connector-azure-sql-data-warehouse

Question #93

HOTSPOT -

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
Azure Databricks is an Apache Spark-based collaborative analytics platform.	○	○
Azure Analysis Services is used for transactional workloads.	○	○
Azure Data Factory orchestrates data integration workflows.	○	○

Answer Area

Statements	Yes	No
Azure Databricks is an Apache Spark-based collaborative analytics platform.	○	○
Azure Analysis Services is used for transactional workloads.	○	○
Azure Data Factory orchestrates data integration workflows.	○	○

Answer:

Reference:
https://docs.microsoft.com/en-us/azure/databricks/scenarios/what-is-azure-databricks https://docs.microsoft.com/en-us/azure/analysis-services/analysis-services-overview https://docs.microsoft.com/en-us/azure/data-factory/introduction

Question #94

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

Answer: *C*

Question #95

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

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.

Answer Area

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.

Answer:

Question #96

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
Processing salary payments once a month is an example of a batch workload.	○	○
A wind turbine that sends 50 sensor readings per second is an example of a streaming workload.	○	○
A home electricity meter that sends readings once a day to an energy provider is an example of a streaming workload.	○	○

Answer:

Answer Area

Statements	Yes	No
Processing salary payments once a month is an example of a batch workload.	○	○
A wind turbine that sends 50 sensor readings per second is an example of a streaming workload.	○	○
A home electricity meter that sends readings once a day to an energy provider is an example of a streaming workload.	○	○

Question #97

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

Answer: *D*
Reference:
https://docs.microsoft.com/en-in/azure/azure-monitor/overview
Question #98

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

Answer: *B*
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/sql-data-warehouse-manage-compute-overview
Question #99

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

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

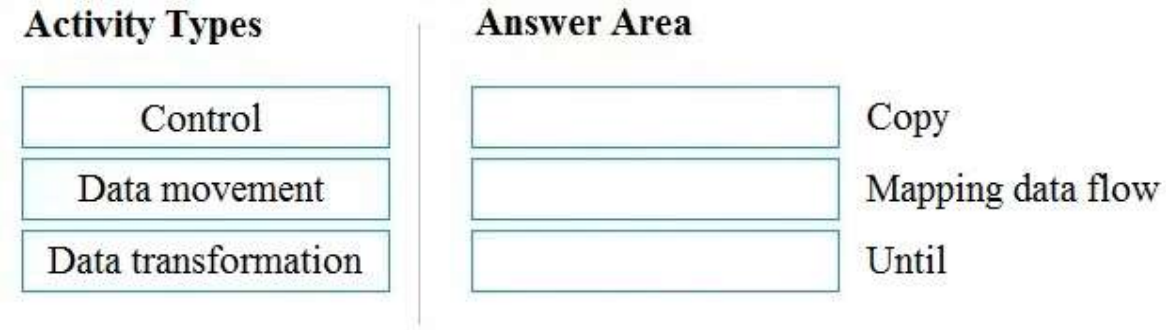
Answer: *B*
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/concepts-pipeline-execution-triggers#trigger-execution
Question #100

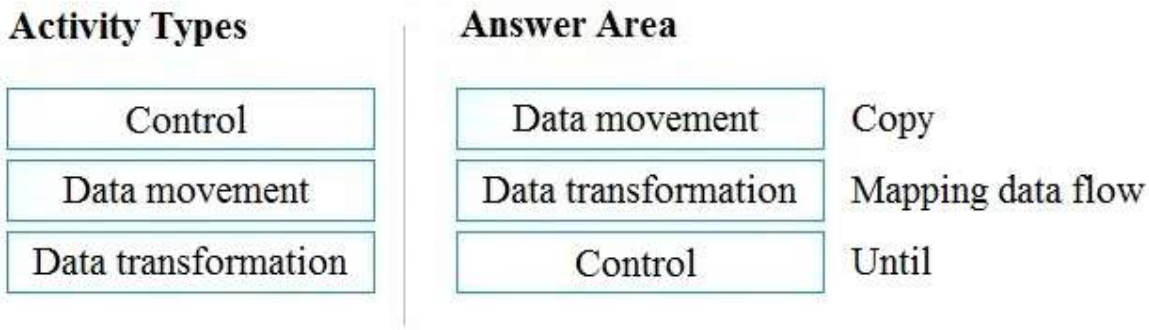
Your company has a reporting solution that has paginated reports. The reports query a dimensional model in a data warehouse.
Which type of processing does the reporting solution use?

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

Answer: *C*
Reference:
https://datawarehouseinfo.com/how-does-oltp-differ-from-olap-database/
Question #101

DRAG DROP -
Match the types of activities to the appropriate Azure Data Factory activities.
To answer, drag the appropriate activity type from the column on the left to its Data Factory activity on the right. Each activity type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.
Select and Place:





Answer:
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/concepts-pipelines-activities#data-transformation-activities
Question #102

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

Answer: *BDF*
B: Transactional data tends to be heavy writes, moderate reads.
D: Typical traits of transactional data include: schema on write, strongly enforced
F: Transactional data tends to be highly normalized.
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-transaction-processing
Question #103

Which two activities can be performed entirely by using the Microsoft Power BI service? Each 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

Answer: *AD*

Question #104

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

In Azure Data Factory, you can use [▼] to orchestrate pipeline activities that depend on the output of other pipeline activities.

- a control flow
- a dataset
- a linked service
- an integration runtime

Answer Area

In Azure Data Factory, you can use [▼] to orchestrate pipeline activities that depend on the output of other pipeline activities.

a control flow
a dataset
a linked service
an integration runtime

Answer:
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/frequently-asked-questions
Question #105

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

Answer: *B*
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 #106

Which two Azure services can be used to provision Apache Spark clusters? Each 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

Answer: *BC*
Reference:
https://www.sqlshack.com/a-beginners-guide-to-azure-databricks/
Question #107

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

Answer: *A*
Reference:
https://docs.microsoft.com/en-us/azure/architecture/data-guide/relational-data/online-transaction-processing
Question #108

Which three objects can be added to a Microsoft Power BI dashboard? Each 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

Answer: *ACE*
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 #109

HOTSPOT -
For each of the following statements, select Yes if the statement is true. Otherwise, select No.
NOTE: Each correct selection is worth one point.
Hot Area:

Answer Area

Statements	Yes	No
A Microsoft Power BI dashboard is associated with a single workspace.	○	○
A Microsoft Power BI dashboard can only display visualizations from a single dataset.	○	○
A Microsoft Power BI dashboard can display visualizations from a Microsoft Excel workbook.	○	○

Answer Area

Statements	Yes	No
A Microsoft Power BI dashboard is associated with a single workspace.	○	○
A Microsoft Power BI dashboard can only display visualizations from a single dataset.	○	○
A Microsoft Power BI dashboard can display visualizations from a Microsoft Excel workbook.	○	○

Answer:
Reference:
https://docs.microsoft.com/en-us/power-bi/connect-data/service-datasets-across-workspaces https://docs.microsoft.com/en-us/power-bi/consumer/end-user-dashboardshttps://powerbi.microsoft.com/en-us/excel-and-power-bi/
Question #110

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

Answer: *B*
The Integration Runtime (IR) is the compute infrastructure used by Azure Data Factory to provide the following data integration capabilities across different network environments:
➠ Data Flow
➠ Data movement
➠ Activity dispatch
➠ SSIS package execution
Reference:
https://docs.microsoft.com/en-us/azure/data-factory/concepts-integration-runtime
Question #111

HOTSPOT -
To complete the sentence, select the appropriate option in the answer area.
Hot Area:

Answer Area

A Microsoft Power BI [▼] enables users to create highly formatted,

dashboard
interactive report
paginated report
subscription

fixed-layout documents optimized for printing and archiving.

Question #112

What are two uses of data visualization? Each Answer presents a complete solution.
NOTE: Each correct selection is worth one point.

- A. Represent trends and patterns over time
- B. Implement machine learning to predict future values
- C. Communicate the significance of data
- D. Consistently implement business logic across reports

Answer: *AC*
Data visualization is a key component in being able to gain insight into your data. It helps make big and small data easier for humans to understand. It also makes it easier to detect patterns, trends, and outliers in groups of data.
Data visualization brings data to help you find key business insights quickly and effectively.
Reference:
https://docs.microsoft.com/en-us/azure/synapse-analytics/spark/apache-spark-data-visualization
113

For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

Statements	Yes	No
Azure Databricks is an Apache Spark-based collaborative analytics platform.	○	○
Azure Analysis Services is used for transactional workloads.	○	○
Azure Data Factory orchestrates data integration workflows.	○	○

Ans:

Statements	Yes	No
Azure Databricks is an Apache Spark-based collaborative analytics platform.	○	○
Azure Analysis Services is used for transactional workloads.	○	○
Azure Data Factory orchestrates data integration workflows.	○	○

114

For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

Statements	Yes	No
A Microsoft Power BI dashboard is associated with a single workspace.	○	○
A Microsoft Power BI dashboard can only display visualizations from a single dataset.	○	○
A Microsoft Power BI dashboard can display visualizations from a Microsoft Excel workbook.	○	○

Answe

Statements	Yes	No
A Microsoft Power BI dashboard is associated with a single workspace.	○	○
A Microsoft Power BI dashboard can only display visualizations from a single dataset.	○	○
A Microsoft Power BI dashboard can display visualizations from a Microsoft Excel workbook.	○	○

115.

To complete the sentence, select the appropriate option in the answer area.

In Azure Data Factory, you can use [▼] to orchestrate pipeline activities that depend on the output of other pipeline activities.

- a control flow
- a dataset
- a linked service
- an integration runtime

Answer:

In Azure Data Factory, you can use [a control flow ▼] to orchestrate pipeline activities that depend on the output of other pipeline activities.

- a control flow
- a dataset
- a linked service
- an integration runtime

Reference:
https://docs.microsoft.com/en-us/azure/data-factory/frequently-asked-questions

116.

Match the types of activities to the appropriate Azure Data Factory activities.
To answer, drag the appropriate activity type from the column on the left to its Data Factory activity on the right. Each activity type may be used once, more than once, or not at all.
NOTE: Each correct match is worth one point.

Activity Types	Answer Area	
Control		Copy
Data movement		Mapping data flow
Data transformation		Until

Answer:

Data movement	Copy
Data transformation	Mapping data flow
Control	Until

Reference:

117.

For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

Statements	Yes	No
Processing salary payments once a month is an example of a batch workload.	○	○
A wind turbine that sends 50 sensor readings per second is an example of a streaming workload.	○	○
A home electricity meter that sends readings once a day to an energy provider is an example of a streaming workload.	○	○

Answer:

Statements	Yes	No
Processing salary payments once a month is an example of a batch workload.	○	○
A wind turbine that sends 50 sensor readings per second is an example of a streaming workload.	○	○
A home electricity meter that sends readings once a day to an energy provider is an example of a streaming workload.	○	○

118.

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.

To complete the sentence, select the appropriate option in the answer area.

Ans:

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.

119.

A bar chart showing year-to date sales by region is an example of which type of analytics?

A. descriptive

B. diagnostic

C. predictive

D. prescriptive

Ans : B

120.

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

Ans : C

121.

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

Ans : A

122.

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

Ans: ACE

123.

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

Ans: A

124.

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

Ans: AD

125.

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

Ans:DBE

126.

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

A. a control flow

B. a trigger

C. a parameter

D. an activity

Ans:B

127.

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

Ans:D

Reference:

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

128.

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

Ans: B