

## Microsoft.Pre.DP-500.20q - DEMO.vce

Number: DP-500  
Passing Score: 800  
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**Exam Code:** DP-500

**Exam Name:** Designing and Implementing Enterprise-Scale Analytics Solutions Using Microsoft Azure and Microsoft Power BI

**Website:** <https://VCEup.com/>

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- Topic 01
- Topic 02
- Mix Questions



**Topic 01****QUESTION 1**

Topic 1, Litware, Inc.

**Overview**

Litware, Inc. is a retail company that sells outdoor recreational goods and accessories. The company sells goods both online and at its stores located in six countries.

**Azure Resources**

Litware has the following Azure resources:

- An Azure Synapse Analytics workspace named synapseworkspace1
- An Azure Data Lake Storage Gen2 account named datalake1 that is associated with synapseworkspace1
- A Synapse Analytics dedicated SQL pool named SQLDW

**Dedicated SQL Pool**

SQLDW contains a dimensional model that contains the following table.

Name	Relevant column	Description
dbo.Customer	CustomerKey, CustomerID, CustomerEmail	The table currently contains 250,000 rows. Each row identifies a unique customer.
dbo.Product	ProductKey, ProductID, ProductName, ProductCategory, IsActive	The table currently contains 2,500 rows. Each row identifies a unique product.
dbo.Date	Date, Month, Year	The table currently contains 3,653 rows. Each row identifies a unique date.
dbo.SalesTransactions	CustomerKey, ProductKey, SalesDate, SalesChannelKey, SalesAmount, QuantitySold	The table currently contains 75 million rows. Each row identifies the purchase of a single product in a sales transaction.
dbo.SalesChannel	SalesChannelKey, SalesChannel	The table currently contains two rows to identify whether a sale occurred online or in a store.

SQLDW contains the following additional tables.

Name	Relevant column	Description
MLModel	Model, Model_Name	The table contains a machine learning model named PredictPurchase that predicts the likelihood of customers purchasing a specific product based on their past purchases.
CustomersWithProductScore	CustomerID, CustomerEmail, ProductID, ProductName, Score	The Score column contains the results from calling the predictive model.

SQLDW contains a view named dbo.CustomerPurchases that creates a distinct list of values from dbo.Customer [customerID], dbo.Customer [CustomerEmail], dbo.Product[ProductID] and dbo.Product[ProductName].

The sales data in SQLDW is updated every 30 minutes. Records in dbo.SalesTransactions are updated in SQLDW up to three days after being created. The records do NOT change after three days.

**Power BI**

Litware has a new Power BI tenant that contains an empty workspace named Sales Analytics.

All users have Power B1 Premium per user licenses.

IT data analysts are workspace administrators. The IT data analysts will create datasets and reports.

A single imported dataset will be created to support the company's sales analytics goals. The dataset will be refreshed every 30 minutes.

**Analytics Goals**

Litware identifies the following analytics goals:

- Provide historical reporting of sales by product and channel over time.
- Allow sales managers to perform ad hoc sales reporting with minimal effort.
- Perform market basket analysis to understand which products are commonly purchased in the same transaction.
- Identify which customers should receive promotional emails based on their likelihood of purchasing promoted products.

Litware plans to monitor the adoption of Power BI reports over time. The company wants custom Power BI usage reporting that includes the percent change of users that view reports in the Sales Analytics workspace each month.

**Security Requirements**

Litware identifies the following security requirements for the analytics environment:

- All the users in the sales department and the marketing department must be able to see Power B1 reports that contain market basket analysis and data about which customers are likely to purchase a product.
- Customer contact data in SQLDW and the Power B1 dataset must be labeled as Sensitive. Records must be kept of any users that use the sensitive data.
- Sales associates must be prevented from seeing the CustomerEmail column in Power B1 reports.
- Sales managers must be prevented from modifying reports created by other users.

**Development Process Requirements**

Litware identifies the following development process requirements:

- SQLDW and datalake1 will act as the development environment. Once feature development is complete, all entities in synapseworkspace1 will be promoted to a test workspace, and then to a production workspace.
- Power BI content must be deployed to test and production by using deployment pipelines.
- All SQL scripts must be stored in Azure Repos.

The IT data analysts prefer to build Power BI reports in Synapse Studio.

A.

**Correct Answer:****Section: (none)****Explanation****Explanation/Reference:**

**QUESTION 2**

What should you configure in the deployment pipeline?

- A. a backward deployment
- B. a selective deployment
- C. auto-binding
- D. a data source rule

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 3**

DRAG DROP

You need to implement object-level security (OLS) in the Power BI dataset for the sales associates.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

**Actions**

- From Power BI Desktop, add a table filter to the role.
- From Power BI Desktop, create a role for the sales associates.
- From Tabular Editor, set Object Level Security to **None** for the Customer[Email] column and save the changes.
- From Power BI Desktop, publish the dataset to the Sales Analytics workspace.
- From Tabular Editor, set Object Level Security to **None** for the Customer table and save the changes.

**Answer Area**

**Correct Answer:**

**Actions**

- From Power BI Desktop, add a table filter to the role.
- 
- 
- 
- From Tabular Editor, set Object Level Security to **None** for the Customer table and save the changes.

**Answer Area**

- From Power BI Desktop, create a role for the sales associates.
- From Tabular Editor, set Object Level Security to **None** for the Customer[Email] column and save the changes.
- From Power BI Desktop, publish the dataset to the Sales Analytics workspace.

**Section:** (none)

**Explanation**

**Explanation/Reference:**



**QUESTION 4****HOTSPOT**

You need to populate the CustomersWithProductScore table.

How should you complete the stored procedure? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

```
DECLARE @model  
SELECT model  
FROM MLModel  
WHERE model_name = 'PredictPurchase'  
);  
INSERT INTO CustomersWithProductScore (  
    CustomerID  
    ,CustomerEmail  
    ,ProductID  
    ,ProductName  
    ,Score  
)  
SELECT d.CustomerID  
    ,d.CustomerEmail  
    ,d.ProductID  
    ,d.ProductName  
    ,p.score  
FROM PREDICT(MODEL = @model, DATA =  
    WITH (score FLOAT) AS p;  
    AS d)
```

Options for the first dropdown (next to =):

- BIT
- FLOAT
- NVARCHAR(1000)
- VARBINARY(max)

Options for the second dropdown (next to AS d):

- dbo.Customer
- dbo.CustomerPurchases
- dbo.CustomersWithProductScore
- dbo.Product

Correct Answer:

**Answer Area**

```

DECLARE @model
SELECT model
FROM MLModel
WHERE model_name = 'PredictPurchase'
);

INSERT INTO CustomersWithProductScore (
    CustomerID
    ,CustomerEmail
    ,ProductID
    ,ProductName
    ,Score
)

SELECT d.CustomerID
    ,d.CustomerEmail
    ,d.ProductID
    ,d.ProductName
    ,p.score
FROM PREDICT(MODEL = @model, DATA =
    WITH (score FLOAT) AS p;
  
```

BIT  
 FLOAT  
 NVARCHAR(1000)  
 VARBINARY(max)

AS d)

dbo.Customer  
 dbo.CustomerPurchases  
 dbo.CustomersWithProductScore  
 dbo.Product

Section: (none)

Explanation

Explanation/Reference:

#### QUESTION 5

DRAG DROP

You need to create the customized Power BI usage reporting. The Usage Metrics Report dataset has already been created. The solution must minimize development and administrative effort. Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:



Actions	Answer Area
From Power BI Desktop, open the <b>Usage Metrics Report</b> dataset in the Sales Analytics workspace.	
Add a report measure.	
Publish the report to the Sales Analytics workspace.	
From powerbi.com, create a new report from the Usage Metrics Report dataset in the Sales Analytics workspace.	
Request access to the Power BI audit logs.	
Add visuals to the report.	

Correct Answer:

Actions	Answer Area
	Request access to the Power BI audit logs.
	Add a report measure.
Publish the report to the Sales Analytics workspace.	From Power BI Desktop, open the <b>Usage Metrics Report</b> dataset in the Sales Analytics workspace.
	From powerbi.com, create a new report from the Usage Metrics Report dataset in the Sales Analytics workspace.
Add visuals to the report.	

Section: (none)  
Explanation

Explanation/Reference:

**Topic 02****QUESTION 1**

Topic 2, Contoso, Ltd

Overview

Contoso, Ltd. is a company that sells enriched financial data to a variety of external customers.

Contoso has a main office in Los Angeles and two branch offices in New York and Seattle.

Data Infrastructure

Contoso has a 50-TB data warehouse that uses an instance of SQL Server on Azure Virtual Machines.

The data warehouse populates an Azure Synapse Analytics workspace that is accessed by the external customers. Currently, the customers can access all the data.

Contoso has one Power BI workspace named FinData that contains a single dataset. The dataset contains financial data from around the world. The workspace is used by 10 internal users and one external customer. The dataset has the following two data sources: the data warehouse and the Synapse Analytics serverless SQL pool.

Users frequently query the Synapse Analytics workspace by using Transact-SQL.

User Problems

Contoso identifies the following user issues:

- Some users indicate that the visuals in Power BI reports are slow to render when making filter selections.
- Users indicate that queries against the serverless SQL pool fail occasionally because the size of tempdb has been exceeded.
- Users indicate that the data in Power BI reports is stale. You discover that the refresh process of the Power BI model occasionally times out. Planned Changes Contoso plans to implement the following changes:
- Into the existing Power BI dataset, integrate an external data source that is accessible by using the REST API.
- Build a new dataset in the FinData workspace by using data from the Synapse Analytics dedicated SQL pool.
- Provide all the customers with their own Power BI workspace to create their own reports. Each workspace will use the new dataset in the FinData workspace.
- Implement subscription levels for the customers. Each subscription level will provide access to specific rows of financial data.
- Deploy prebuilt datasets to Power BI to simplify the query experience of the customers.
- Provide internal users with the ability to incorporate machine learning models loaded to the dedicated SQL pool.

A.

**Correct Answer:**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

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**QUESTION 2**

You need to recommend a solution to add new fields to the financial data Power BI dataset with data from the Microsoft SQL Server data warehouse.

What should you include in the recommendation?

- A. Azure Purview
- B. Site-to-Site VPN
- C. an XMLA endpoint
- D. the on-premises data gateway

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

**QUESTION 3**

You need to recommend a solution for the customer workspaces to support the planned changes.

Which two configurations should you include in the recommendation? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Set Use datasets across workspaces to Enabled
- B. Publish the financial data to the web.
- C. Grant the Build permission for the financial data to each customer.
- D. Configure the FinData workspace to use a Power BI Premium capacity.

**Correct Answer: C**

Section: (none)

Explanation

Explanation/Reference:

#### QUESTION 4

DRAG DROP

You need to integrate the external data source to support the planned changes.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

- Create an Apache Spark data source.
- Merge columns.
- Create a web data source.
- Expand the attributes.
- Publish the model.

**Answer Area**

Correct Answer:

**Actions**

- Create an Apache Spark data source.
- Merge columns.
- 
- 

**Answer Area**

- Create a web data source.
- Expand the attributes.
- Publish the model.

Section: (none)

Explanation

Explanation/Reference:

#### QUESTION 5

DRAG DROP

You need to create Power BI reports that will display data based on the customers' subscription level.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:



Actions	Answer Area
Create a perspective.	
Enable bidirectional filtering.	
Create a DAX expression.	
Create row-level security (RLS) roles.	
Add members to row-level security (RLS) roles.	

Correct Answer:

Actions	Answer Area
Create a perspective.	Create a DAX expression.
	Enable bidirectional filtering.
	Add members to row-level security (RLS) roles.
Create row-level security (RLS) roles.	

Section: (none)  
Explanation

Explanation/Reference:

**Mix Questions****QUESTION 1**

You develop a solution that uses a Power BI Premium capacity. The capacity contains a dataset that is expected to consume 50 GB of memory. Which two actions should you perform to ensure that you can publish the model successfully to the Power BI service? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Increase the Max Offline Dataset Size setting.
- B. Invoke a refresh to load historical data based on the incremental refresh policy.
- C. Restart the capacity.
- D. Publish an initial dataset that is less than 10 GB.
- E. Publish the complete dataset.

**Correct Answer:** CE

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 2**

You have a Power BI workspace named Workspace1 in a Premium capacity. Workspace1 contains a dataset. During a scheduled refresh, you receive the following error message: "Unable to save the changes since the new dataset size of 11,354 MB exceeds the limit of 10,240 MB." You need to ensure that you can refresh the dataset. What should you do?

- A. Turn on Large dataset storage format.
- B. Connect Workspace1 to an Azure Data Lake Storage Gen2 account
- C. Change License mode to Premium per user.
- D. Change the location of the Premium capacity.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

**QUESTION 3**

You have a dataset that contains a table named UserPermissions. UserPermissions contains the following data.

User	Region
CONTOSO\User1	1
CONTOSO\User2	2
CONTOSO\User3	1
CONTOSO\User4	3
CONTOSO\User4	5

You plan to create a security role named User Security for the dataset. You need to filter the dataset based on the current users. What should you include in the DAX expression?

- A. [UserPermissions] - USERNAME()
- B. [UserPermissions] - USERPRINCIPALNAME()
- C. [User] = USERPRINCIPALNAME()
- D. [User] = USERNAMEQ()
- E. [User] = USEROBJECTID()

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 4**

You have a Power BI dataset that uses DirectQuery against an Azure SQL database.

Multiple reports use the dataset.

A database administrator reports that too many queries are being sent from Power BI to the database.

You need to reduce the number of queries sent to the database. The solution must meet the following requirements:

- DirectQuery must continue to be used.
  - Visual interactions in all the reports must remain as they are configured currently.
  - Consumers of the reports must only be allowed to apply filters from the Filter pane.
- Which two settings should you select? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Disabling cross highlighting/filtering by default
- B. Add a single Apply button to the filter pane to apply changes at once
- C. Add an Apply button to each slicer to apply changes when you're ready
- D. Add Apply buttons to all basic filters to apply changes when you're ready
- E. Ignore the Privacy Levels and potentially improve performance

**Correct Answer:** CD

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 5**

You have a Power BI data model.

You need to refresh the data from the source every 15 minutes.

What should you do first?

- A. Enable the XMLA endpoint.
- B. Define an incremental refresh policy.
- C. Change the storage mode of the dataset.
- D. Configure a scheduled refresh.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:****QUESTION 6**

You are configuring a Power BI report for accessibility as shown in the following table.





You need to change the default colors of all three visuals to make the report more accessible to users who have color vision deficiency. Which two settings should you configure in the Customize theme window? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Theme colors
- B. Sentiment colors
- C. Divergent colors
- D. First-level elements colors

**Correct Answer: D**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### QUESTION 7

You are creating a Python visual in Power BI Desktop.

You need to retrieve the value of a column named Unit Price from a DataFrame.

How should you reference the Unit Price column in the Python code?

- A. `pandas.DataFrame('Unit Price')`
- B. `dataset['Unit Price']`
- C. `data = [Unit Price]`
- D. `('Unit Price')`

**Correct Answer: A**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

#### QUESTION 8

You have a Power BI report that contains one visual.

You need to provide users with the ability to change the visual type without affecting the view for other users.

What should you do?

- A. From Report setting, select Personalize visuals.
- B. From Tabular Editor, create a new perspective.
- C. From the Bookmarks pane, select Focus mode, and then select Add.

D. From Visual options in Report settings, select Use the modern visual header with updated styling options.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 9

You have a Power BI report that contains the visual shown in the following exhibit.



Product	Sales
Amarilla	17,747,116.06
Carretera	13,815,307.89
Montana	15,390,801.88
Paseo	33,011,143.95
Velo	18,250,059.47
VTT	20,511,921.02
<b>Total</b>	<b>118,726,350.26</b>

You need to make the visual more accessible to users who have color vision deficiency. What should you do?

- A. Change the font color of values in the Sales column to white.
- B. Change the red background color to orange.
- C. Add icons to represent the sales status of each product.
- D. Add additional measures to the table values.

**Correct Answer:** B

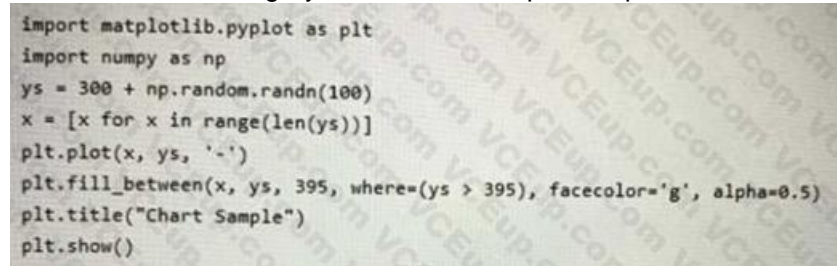
**Section:** (none)

**Explanation**

**Explanation/Reference:**

#### QUESTION 10

You have the following Python code in an Apache Spark notebook.



```
import matplotlib.pyplot as plt
import numpy as np
ys = 300 + np.random.randn(100)
x = [x for x in range(len(ys))]
plt.plot(x, ys, '-')
plt.fill_between(x, ys, 395, where=(ys > 395), facecolor='g', alpha=0.5)
plt.title("Chart Sample")
plt.show()
```

Which type of chart will the code produce?

- A. a stacked bar chart
- B. a pie chart
- C. a bar chart
- D. an area chart

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

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