My Notes on this Section

Exam Perspective

SQL Server monitoring have been removed from syllabus on 31st July, but still questions are coming in exam. So, please make sure you do not ignore this.

My Notes

Log Analytics
Log Analytics allows you to write queries to analyze logs in Azure.

Further reference: Get started with Log Analytics in Azure Monitor

SQL Server Monitoring
Query Performance Insight allows you to view database queries that consume the most resources and those that take the longest to run.
It does not suggest when to create or drop and index.

References:
Query Performance Insight for Azure SQL Database

Azure SQL Database – Diagnostic logging options
SQLInsights gathers performance information and provides recommendations.
QueryStoreRuntimeStatistics provides information about CPU usage and query duration. Basic metrics provides CPU and DTU usage and limits.

QueryStoreWaitStatistics. This provides information about the resources that caused queries to wait, such as the CPU, logs, or locks.

DatabaseWaitStatistics. This provides information about the time a database spent on waiting.
Azure SQL Database metrics and diagnostics logging

SQL Database Advisor
It allows you to review recommendations for creating and dropping indexes, fixing schemas, and parameterizing queries.

References
Find and apply performance recommendations

Azure Advisor: provides recommendations for availability, security, performance, and cost. It integrates with SQL Database Advisor to provide recommendations for creating and dropping indexes.
References:
Improve performance of Azure applications with Azure Advisor
Introduction to Azure Advisor

Query Store - provides statistics on query performance. It helps you identify performance differences that are caused by query changes. It is disabled by default.
References:
Monitoring performance by using the Query Store
Operating the Query Store in Azure SQL Database
Query Store Usage Scenarios

SET SHOWPLAN_TEXT ON
This statement allows you to display query execution information without actually executing the query. This statement is intended for applications that display text.

SET SHOWPLAN_TEXT (Transact-SQL)

SET SHOWPLAN_ALL ON
This statement allows you to display query execution information without actually executing the query. This statement is intended for applications that can display text. It provides additional columns of information for each row that is output.

SET SHOWPLAN_ALL (Transact-SQL)

sys.dm_pdw_exec_requests
This view returns all queries that are currently running or that were recently running. You can use the following SQL statement to return the top 10 longest running queries:

SELECT TOP 10 * FROM sys.dm_pdw_exec_requests ORDER BY total_elapsed_time DESC;

Monitor your workload using DMVs

LABEL
LABEL option to assign a comment to the query. This adds a label to the query. For example, you can add the label to a query as follows:

SELECT * FROM FactStoreSales OPTION (LABEL = 'Q4');

You can then easily locate the query's execution steps with the following statement:

SELECT * FROM sys.dm_pdw_exec_requests WHERE [label] = 'Q4';
References:

OPTION Clause (Transact-SQL)

VIEW DATABASE STATE permission.
This permission is required to access Dynamic Management Views (DMVs), which allow you to investigate query execution in Azure SQL Data Warehouse. The view that contains logins is sys.dm_pdw_exec_sessions. It actually contains the last 10,000 logins.

VIEW DEFINITION permission.
This allows the employee to view metadata of an object. For example, the employee can view table metadata in the sys.objects catalog.

ALTER ANY CONNECTION permission
This allows the employee to manage the database server.

ALTER ANY USER permission
This allows the employee to manage database users.

GRANT Database Permissions (Transact-SQL)