IBM Exam 610 Question Bank
2/8/15
Time Limit: 90 Minutes   **Name (Print):** _____

This question bank contains 7 pages (including this cover page) and 15 questions.

- IBM Exam 610 corresponds to **Test C2090-610: DB2 10.1 Fundamentals**

- The questions adapted from the following sources:

  - **DB 2 10.1 Fundamentals Certification Study Guide** by Roger E. Sanders

Page	Points	Score
2	2	
3	2	
4	3	
5	3	
6	5	
Total:	15	

Planning

1. (1 point) A database will be used primarily to identify sales patterns for products sold within the last three years and to summarize sales by region, on a quarterly basis. Which type of system is needed?

    A. Analytical

    B. DB2 pureScale

    C. Data warehouse

    D. Online transaction processing (OLTP)

Explanation:

Data warehouses (*Correct Answer C*) are typically used to store and manage large volumes of data that is often historical in nature and that is used primarily for analysis. Thus, a data warehouse could be used to identify sales patterns for products sold within the past three years or to summarize sales by region, on a quarterly basis. *InfoSphere Warehouse* is offered for data warehouse.

Online transaction processing (OLTP) systems (*Answer D*), are designed to support day-to-day, mission-critical business activities such as web-based order entry and stock trading. *DB2 pureScale feature* is offered for OLTP workloads.

Analytical workloads (*Answer A*) are better handled by a specialized product known as *DB2 for i and by IBM BLU Acceleration*, which is currently available only with DB2 10.5 for LUW.

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2. (1 point) Which product can be used to tune performance for a single query?

    A. IBM Data Studio

    B. IBM Control Center

    C. IBM Data Administrator

    D. IBM Workload Manager

Explanation:

IBM Data Studio (*Correct Answer A*) is an Eclipse-based, integrated development environment (IDE) that can be used to perform instance and database administration, routine (SQL procedure, SQL functions, etc.) and application development, and performance-tuning tasks. It replaces the *DB2 Control Center* (*Answer B*) as the standard GUI tool for DB2 database administration and application development.

IBM Workload Manager, or WLM (*Answer D*) is a comprehensive workload management feature that can help identify, manage, and control database workloads to maximize database server throughput and resource utilization.

There is **NO** such product as IBM Data Administrator (*Answer C*).

3. (1 point) Which two DB2 products are suitable for very large data warehouse applications? (Choose two.)

   A. DB2 for i

   B. DB2 for AIX

   C. DB2 for z/OS

   D. DB2 pureScale

   E. DB2 Express-C

Explanation:

DB2 for i (*Answer A*), formerly known as DB2 for i5/OS, is an advanced, 64-bit Relational Database Management System that leverages the high performance, virtualization, and energy efficiency features of IBM's Power Systems; its self-managing attributes, security, and built-in analytical processing functions make *DB2 for i* an ideal database server for applications that are analytical in nature.

DB2 for z/OS (*Correct Answer C* is a multiuser, full-function database management system that has been designed specifically for z/OS, IBM's flagship mainframe operating system. Tightly integrated with the IBM mainframe, *DB2 for z/OS* leverages the strengths of System z 64-bit architecture to provide, among other things, the ability to support complex data warehouses.

In addition to DB2 for z/OS, all of the DB2 Editions available **except** *DB2 Express-C* (*Answer E*) and *DB2 Express Edition* can be used to create data warehouse and OLTP environments. **However**, IBM offers two solutions that are tailored specifically for one workload type or the other: *InfoSphere Warehouse* for data warehousing workloads and the *DB2 pureScale Feature* (*Answer D*) for OLTP workloads.

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4. (1 point) What is the DB2 Workload Manager (WLM) used for?

   A. To identify, diagnose, solve, and prevent performance problems in DB2 products and associated applications.

   B. To customize execution environments for the purpose of controlling system resources so that one department or service class does not overwhelm the system.

   C. To respond to significant changes in a database's workload by dynamically distributing available memory resources among several different database memory consumers.

   D. To improve the performance of applications that require frequent, but relatively transient, simultaneous user connections by allocating host database resources only for the duration of an SQL transaction.

Explanation:

IBM InfoSphere Optim Performance Manager Extended Edition can be used to identify, diagnose, solve, and prevent performance problems in DB2 products and associated applications (*Answer A*)

> With *DB2 Workload Manager*, it is possible to customize execution environments so that no single workload can control and consume all of the system resources available. (This prevents any one department or service class from overwhelming the system.) (*Correct Answer B*)
>
> The *Self-Tuning Memory Manager (STMM)* responds to significant changes in a database's workload by dynamically distributing available memory resources among several different database memory consumers. (*Answer C*)
>
> The *Connection Concentrator* improves the performance of applications that require frequent, but relatively transient, simultaneous user connections by allocating host database resources only for the duration of an SQL transaction. (*Answer D*)

5. (1 point) Which of the following is NOT a characteristic of a data warehouse?

    A. Sub-second response time

    B. Voluminous historical data

    C. Heterogeneous data sources

    D. Summarized queries that perform aggregations and joins

> **Explanation:**
>
> Sub-second response time is a feature of OLTP systems.

6. (1 point) Which statement about the DB2 pureScale feature is NOT true?

    A. The DB2 pureScale feature provides a database cluster solution for nonmainframe platforms.

    B. The DB2 pureScale feature is only available as part of DB2 Advanced Enterprise Server Edition.

    C. The DB2 pureScale feature can only work with the General Parallel File System (GPFS) file system.

    D. The DB2 pureScale feature is best suited for online transaction processing (OLTP) workloads.

> **Explanation:**
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> The *DB2 pureScale feature* is included as part of *DB2 Workgroup Server Edition (WSE)*, *DB2 Enterprise Server Edition (ESE)*, and *DB2 Advanced Enterprise Server Edition (AESE)*.

7. (1 point) Which two statements about large object (LOB) locators are true? (Choose two.)

   A. A LOB locator represents a value for a LOB resource that is stored in a database.

   B. A LOB locator is a simple token value that is used to refer to a much bigger LOB value.

   C. A LOB locator is a special data type that is used to store LOB data in external binary files.

   D. A LOB locator represents a value for a LOB resource that is stored in an external binary file.

   E. A LOB locator is a mechanism that acts similar to an index in the way that is organizes LOB values so they can be quickly located in response to a query.

   Explanation:
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8. (1 point) Which type of database workload typically involves making changes to a small number of records within a single transaction?

   A. Decision support

   B. Data warehousing

   C. Online analytical processing (OLAP)

   D. Online transaction processing (OLTP)

9. (1 point) Which of the following is NOT a characteristic of an OLTP database?

   A. Current data

   B. Frequent updates

   C. Granular transactions

   D. Optimized for queries

10. (1 point) Which two platforms support DB2 10.1 pureScale environments? (Choose two.)

   A. IBM mainframes running z/OS

   B. IBM p Series servers running AIX

   C. IBM p Series servers running Linux

   D. IBM x Series servers running Linux

   E. IBM x Series servers running a supported version of Windows

11. (1 point) Which tool can analyze and provide recommendations for tuning individual queries?

    A. IBM InfoSphere Data Architect

    B. IBM InfoSphere Optim Query Tuner

    C. IBM InfoSphere Optim pureQuery Runtime

    D. IBM InfoSphere Optim Performance Manager Extended Edition

12. (1 point) Which SQL statement will create a table named EMPLOYEE that can be used to store XML data?

    A. CREATE TABLE employee (empid INT, resume XML)

    B. CREATE TABLE employee (empid INT, resume XML(2000))

    C. CREATE TABLE employee (empid INT, resume CLOB AS XML)

    D. CREATE TABLE employee (empid INT, resume CLOB USING XML)

13. (1 point) What DB2 product provides a complete data warehousing solution that contains components that facilitate data warehouse construction and administration?

    A. DB2 pureScale Feature

    B. DB2 Workload Manager

    C. IBM InfoSphere Warehouse

    D. Database Partitioning Feature

14. (1 point) Which statement about IBM Data Studio is NOT true?

    A. The IBM Data Studio administration client can be installed on servers running Red Hat Linux, SUSE Linux, Windows, and AIX.

    B. IBM Data Studio replaces the DB2 Control Center as the standard GUI interface for DB2 database administration and application development.

    C. IBM Data Studio is an Eclipsed-based, integrated development environment (IDE) that can be used to perform instance and database administration.

    D. IBM Data Studio allows users to connect to a DB2 database using a wizard; however, users are required to provide login credentials before a connection will be established.

15. (1 point) Which statement about inline large objects (LOBs) is NOT true?

    A. When a table contains columns with inline LOBs, fewer rows can fit on a page.

    B. Inline LOBs are created by appending the INLINE LENGTH clause to a LOB column's definition.

    C. Because DML operations against inline LOBs are never logged, their use can reduce logging overhead.

    D. Inline LOBs improve query performance by storing LOB data in the same data pages as the rest of a table's rows, rather than in a separate LOB storage object.

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