**Sample Questions from DB2 Exam C2090-615 Practice Questions - Copyright 2016 by Robert Wingate**

1. Which of the following are features of BLU Acceleration?

   a) Column-organized tables.
   b) Data skipping.
   c) Actionable compression.
   d) All of the above.

   **The correct answer is D, all of these are included with BLU Acceleration. Features of BLU acceleration include:**

   - **Column-organized tables**
   - **Actionable compression**
   - **Data skipping**
   - **CPU optimized for SIMD**
   - **Scan friendly memory caching**

2. Which of the following commands will enable Oracle compatibility when new DB2 10.5 databases are created?

   a) db2set DB2_COMPATIBILITY=ORACLE
   b) db2set DB2_COMPATIBILITY VALUE=ORA
   c) db2set DB2_COMPATIBILITY_VECTOR=ORA
   d) None of the above.

   **The correct answer is C. To enable Oracle compatibility when new DB2 10.5 databases are created, issue this command:**

   ```
   db2set DB2_COMPATIBILITY_VECTOR=ORA
   ```

   **Each of the other statements would result in an error.**

3. Assume you have an application that needs to aggregate and summarize data from several tables multiple times per day. One way to improve performance of that application would be to use a:

   a) Materialized query table
   b) View
   c) Temporary table
   d) Range clustered table

   **The correct answer is A, a materialized query table (MQT) is a table whose definition is based upon the result of a query, similar to a view. The difference is that the query on which a view is based is run each time the view is referenced. In contrast, an MQT actually**

**stores the query results as data, and you can work with the data that is in the MQT instead of incurring the overhead of running a query which has to regenerate the data each time you run it. An MQT can thereby significantly improve performance for applications that need summarized, aggregated data.**

**Declared temporary tables are created by an application to hold non-persistent data and then destroyed when the application disconnects from the database. A range-clustered table (RCT) has a table layout scheme in which each record in the table has a predetermined record ID (RID). Neither of these would improve performance based on the given scenario.**

4. What is the schema for a GLOBAL TEMPORARY table?

   a) SESSION
   b) DB2ADMIN
   c) TEMP1
   d) USERTEMP

   **The correct answer is A. The schema for a GLOBAL TEMPORARY table is always SESSION. The schema for a GLOBAL TEMPORARY table cannot be DB2ADMIN, TEMP1, or USERTEMP.**

5. Which of the following is not an SQL compatibility enhancement in DB2 10.5?

   a) Row size support is extended.
   b) NULL keys can be excluded from indexes.
   c) String unit attributes improve handling of multi-byte characters.
   d) All of the above are SQL compatibility enhancements in DB2 10.5.

   **The correct answer is D. Row size support, NULL key exclusion from indexes, and new string unit attributes are available compatibility enhancements in DB2 10.5. Row length can now be greater than the maximum field size for the page size of the table space. You can prevent NULL values from being inserted into indexes by specifying the EXCLUDE NULL KEYS clause when you create the index. Database columns that hold character data have a string unit attribute that can be used to define their string data type (specifically OCTETS, CODEUNITS16, CODEUNITS32).**

6. The isolation level most likely to obtain a table lock is:

   a) RR
   b) UR
   c) RS
   d) CS

**The correct answer is A. REPEATABLE READ (RR) is more likely to obtain a table lock than the other isolation levels. Repeatable Read ensures that a query issued multiple times within the same unit of work will produce the exact same results. It does this by locking all rows that could affect the result, and does not permit any adds/changes/deletes to the table that could affect the result. The other isolation levels are less likely to obtain a table lock than RR. READ STABILITY is incorrect because only those rows that are returned by the query are locked (additional rows could be added to the table that would produce a different result in subsequent queries within the same unit of work). CURSOR STABILITY only locks the row upon which the cursor is placed. UNCOMITTED READ is incorrect because it permits reading of uncommitted changes that may never be applied to the database, and acquires few (if any) locks.**

7. Which workload type is most suitable for a decision support environment (DB2_WORKLOAD_TYPE)?

   a) ANALYTICS
   b) SAP
   c) WAS
   d) DW

**The correct answer is A. Setting DB2_WORKLOAD=ANALYTICS optimizes the configuration for analytic workloads. SAP and WAS are values that optimize for the SAP and WebSphere products respectively and are not specific to decision support systems or analytics. There is no DW setting.**

8. Which of the following is true about BLU column-organized tables?

   a) Stores each column on a separate set of pages on disk.
   b) Increases the I/O required to return query data.
   c) Requires all active data be loaded in memory before executing SQL.
   d) All of the above.

**The correct answer is A. Column-organized tables store column data on a separate set of pages on disk. This kind of organization reduces the amount of I/O needed when processing queries because only columns that are referenced in the SQL query need to be retrieved. BLU does not require all the active data to be loaded in memory before it can start executing the SQL.**

9. Which of the following is NOT true about shadow tables?

   a) A shadow table is a column-organized copy of a row-organized table that includes all columns or a subset of columns.
   b) Shadow tables are implemented as materialized query tables (MQTs) and are maintained by replication.
   c) A shadow table is a row-organized copy of a column-organized table that includes all columns or a subset of columns.
   d) Using shadow tables, you can get the performance benefits of BLU Acceleration for analytic queries in an OLTP system.

   **The correct answer is C. It is NOT true that a shadow table is a row-organized copy of a column-organized table that includes all columns or a subset of columns. In fact, a shadow table is a column-organized copy of a row-organized table that includes all columns or a subset of columns. The other statements are true. Shadow tables are implemented as materialized query tables (MQTs) and are maintained by replication. Using shadow tables, you can get the performance benefits of BLU Acceleration for analytic queries in an OLTP system.**

   Topic: Working with DB2 Tables, Views and Indexes

10. Which of the following Oracle features is NOT supported in DB2 10.5?

    a) SQL dialect.
    b) PL/SQL.
    c) Recyclebin capability to recover dropped tables.
    d) All of the above Oracle features are supported in DB2 10.5.

    **The correct answer is C. The recyclebin feature introduced in Oracle 10g allows you to recover dropped tables using the [`flashback table...to before drop`] command. With recyclebin, Oracle does not automatically delete dropped tables. Instead, it renames dropped tables and their associated objects, giving them system-generated recyclebin names that begin with BIN$.**

    **DB2 10.5 does not have the recyclebin feature for dropped tables. In DB2 the deleted table and any related objects must be rebuilt using the normal commands used to create them. DB2 10.5 does support Oracle's SQL dialect and PL/SQL.**

    Topic: Planning

11. Which of the following clauses does NOT allow you to pull data for a particular period from a version enabled table?

    a) FOR BUSINESS_TIME UP UNTIL
    b) FOR BUSINESS_TIME FROM...TO...
    c) FOR BUSINESS_TIME BETWEEN...AND...
    d) All of the above enable you to pull data for a particular period.

    **The correct answer is A. There is no UP UNTIL clause in DB2 temporal data management. The other two clauses are valid to specify a time period in a query against a version enabled table.**

12. Assume you have a long running process and you want to commit results after processing every 500 records, but still want the ability to undo any work that has taken place after the commit point. One mechanism that would allow you to do this is to issue a:

    a) SAVEPOINT
    b) COMMITPOINT
    c) BACKOUT
    d) None of the above.

    **The correct answer is A. Issuing a SAVEPOINT enables you to execute several SQL statements as a single executable block. You can then undo changes back out to that savepoint by issuing a ROLLBACK TO SAVEPOINT statement.**

13. Which of the following is new in DB2 10.5?

    a) Time travel queries.
    b) Java Generic table functions.
    c) Column-organized tables.
    d) All of the above are new with DB2 10.5.

    **The correct answer is C. Column-organized tables are new with DB2 10.5. Time travel queries and Java Generic table functions were all available in DB2 10.1, so they are not new in DB2 10.5.**

14. Which isolation level is most appropriate when few or no updates are expected to a table?

    a) RR
    b) RS
    c) CS
    d) UR

**The correct answer is D. UR - Uncommitted Read uses less overhead than the other isolation levels and is most appropriate for read-only access of tables. The other isolation levels acquire locks that are unnecessary in a read-only environment. Repeatable Read is required to obtain locks to ensure that a query issued multiple times within the same unit of work will produce the exact same results. With READ STABILITY any rows that are returned by the query are locked. CURSOR STABILITY locks the row that the cursor is placed on, which is not necessary in a primarily read-only environment.**

15. Which workload_type is the default if none is specified on the DB2_WORKLOAD variable?

    a) ANALYTICS
    b) SAP
    c) WAS
    d) None of the above.

**The correct answer is D. No default is automatically set for the DB2_WORKLOAD variable. If no value is specified, DB2_WORKLOAD has no influence on the other environmental values.**

**If a value is specified for DB2_WORKLOAD, the value represents a specific grouping of registry variables with predefined settings. For example, the DB2_WORKLOAD=ANALYTICS option ensures that the dft_table_org (default table organization for user tables) parameter is automatically set to COLUMN. Also the ANALYTICS option ensures that the auto_reorg (automatic reorganization) database configuration parameter is set to ON. These are just two examples of environmental settings affected by the ANALYTICS workload.**

16. Which of the following is the correct DDL to use with an ALTER statement to enable versioning for a table TBL1 using history table TBL1HIST?

    a) ALTER TABLE TBL1 ADD VERSIONING USE HISTORY TABLE TBL1HIST
    b) ALTER TABLE TBL1 ENABLE VERSIONING USE HISTORY TABLE TBL1HIST
    c) ALTER TABLE TBL1 ENABLE HISTORY WITH TABLE TBL1HIST
    d) ALTER TABLE TBL1 ADD HISTORY TABLE TBL1HIST WITH VERSIONING

**The correct answer is A. The correct DDL to use with an ALTER statement to enable versioning for a table TBL1 using history table TBL1HIST is:**

```
ALTER TABLE TBL1
ADD VERSIONING
USE HISTORY TABLE TBL1HIST
```