NPTEL Online Certification Courses

Indian Institute of Technology Kharagpur

Google Cloud Computing

(Jul-Oct 2024)

Assignment- Week 3

TYPE OF QUESTION: MCQ/MSQ

Number of questions: **10** **Total mark: 10 X 1 = 10**

QUESTION 1:

CloudSQL can scale upto _____ processor core and _____ of storage capacity?

a) 64, 16TB
b) 64, 10TB
c) 32, 10TB
d) 32, 16TB

Correct Answer: (b)
Detailed Solution: CloudSQL can scale upto 64 processor core and 10TB of storage capacity

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QUESTION 2:

Choose the correct mapping

1. Cloud Bigtable	A. Data warehousing
2. Cloud SQL	B. Non-relational database
3. Bigquery	C. Relational database
4. Cloud Storage	D. Object datastore

a) 1-A 2-C 3-D 4-B
b) 1-B 2-C 3-A 4-D
c) 1-B 2-D 3-C 4-A
d) 1-D 2-A 3-B 4-C

Correct Answer: (b)
Detailed Solution: Cloud storage is an unstructured object datastore to keep images, videos, audios, files etc. Cloud SQL is a relational database, Bigquery is a data warehousing solution, and Bigtable is a non-relational database

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QUESTION 3:

What is the difference between a bucket and an object in cloud storage??

a) A bucket is a physical location for objects, while an object is a logical container for data.
b) A bucket is a logical container for objects, while an object is a physical location for data.
c) A bucket and an object are the same thing.
d) A bucket and an object are different types of resources in cloud storage.

Correct Answer: (b)
Detailed Solution: Buckets are logical containers, while objects are physical files. Buckets are used to organize objects and control access to them. Objects are the actual data that is stored in cloud storage

QUESTION 4:

Which of the following is considered structured data?
a) A collection of social media posts
b) Customer names and addresses stored in a database
c) A repository of company policies in PDF format
d) Audio recordings of customer service calls

Correct Answer: (b)

Detailed Solution: Customer names and addresses stored in a database are considered structured data because they are organized in a defined manner, often in rows and columns, which allows for easy retrieval and analysis. Social media posts, PDF documents, and audio recordings are examples of unstructured data.

QUESTION 5:

Which of the following is NOT a type of NoSQL database?
a) Key-value stores.
b) Relational databases.
c) Document databases.
d) Graph databases.

Correct Answer: (b)
Detailed Solution: The four main types of NoSQL databases are key-value stores, document databases, wide-column stores, and graph databases.

QUESTION 6:

Which of the following requirements is best suited for nearline storage?

a) Data that is rarely accessed but needs to be retrieved within milliseconds
b) Frequently accessed data

c) Data that needs long-term retention with infrequent access
d) Data backup and disaster recovery

Correct Answer: (a)

Detailed Solution: Nearline storage is designed for data that is accessed less frequently but still needs to be retrieved quickly when needed, making it ideal for data that is rarely accessed but needs to be retrieved within milliseconds. Frequently accessed data would be better suited for standard storage, while long-term retention with infrequent access fits coldline storage, and disaster recovery can be appropriate for both coldline and nearline depending on the access frequency requirements.

QUESTION 7:

What types of SQL databases can you manage with Google Cloud SQL?

a) MySQL, MongoDB, Oracle
b) PostgreSQL, SQL Server, MySQL
c) PostgreSQL, Cassandra, SQLite
d) SQL Server, MongoDB, MariaDB

Correct Answer: (b)

Detailed Solution: Google Cloud SQL supports the management of PostgreSQL, SQL Server, and MySQL databases, providing flexibility for different application requirements.

QUESTION 8:

Which of the following is a unique feature of Cloud Spanner compared to traditional relational databases?

a) Support for SQL queries
b) Strongly consistent transactions
c) Globally distributed data with horizontal scalability
d) Indexing capabilities

Correct Answer: (c)

Detailed Solution: Cloud Spanner's unique feature is its ability to provide globally distributed data with horizontal scalability while maintaining strong consistency and support for SQL queries.

QUESTION 9:

What type of data model does Cloud Bigtable use?
a) Document-based
b) Graph-based
c) Wide-column
d) Key-value

Correct Answer: (c)

Detailed Solution: Cloud Bigtable uses a wide-column data model, which allows for efficient storage and retrieval of large datasets by organizing data into rows and columns with high scalability.

QUESTION 10:

In terms of data consistency, which statement is true comparing Google Cloud Datastore with a relational database?

a) Google Cloud Datastore provides strong consistency for all transactions.
b) Relational databases provide eventual consistency by default.
c) Both Google Cloud Datastore and relational databases provide strong consistency.
d) Consistency models depend solely on the application's configuration.

Correct Answer: (d)
Detailed Solution: Google Cloud Datastore offers eventual consistency by default, meaning that reads may not immediately reflect the most recent write. Relational databases can provide strong consistency depending on how they are configured, often defaulting to stronger consistency models than NoSQL databases.