Cloud Computing

Assignment-Week 3

TYPE OF QUESTION: MCQ/MSQ

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

QUESTION 1:

In the context of aggregated demand in resource provisioning in the cloud, how does adding *n* independent demands affect the coefficient of variation (Cv)?

    A) Increases the Cv

    B) Decreases the Cv

    C) Does not change the Cv

    D) Inversely proportional to the mean

Correct Answer: B
Detailed Solution: Adding n independent demands reduces the Cv by $1/\sqrt{n}$

QUESTION 2:

What does the term "biasness towards vendors" imply in the context of SLA monitoring?

    A) Vendor-driven selection of monitoring parameters

    B) Customer-driven selection of monitoring parameters

    C) Balanced approach in monitoring parameters

    D) Lack of active monitoring on the customer's side

Correct Answer: A

Detailed Solution: Biasness towards vendors means measurement of parameters is mostly established according to vendor advantage or in other words vendor-driven selection of monitoring parameters

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QUESTION 3:

In the Openstack storage concept, _____ storage persists until the VM is terminated and is managed by _____.

   A) Nova, Cinder
   B) Ephemeral, Cinder
   C) Cinder, Ephemeral
   D) Ephemeral, Nova

Correct Answer: D

Detailed Solution: In the Openstack storage concept, ephemeral storage persists until the VM terminates and is managed by Nova.

QUESTION 4:

What condition makes periodic provisioning acceptable in the presence of linear demand?

    A) High resource utilization

    B) Non-linear demand

    C) Instantaneous demand

    D) Flat demand

Correct Answer: D

Detailed Solution: If demand is flat, it is linear and periodic provisioning is acceptable.

QUESTION 5:

What is(are) the key factor(s) to consider in a hybrid model for utility pricing?

    A) Reliability and accessibility

    B)   Network cost and usage costs

    C) Peak to average demand ratio

    D) Interoperability overhead

Correct Answer: C

Detailed Solution: The key factor to consider in a hybrid model for utility pricing is ratio of peak to average demand.

QUESTION 6:

What architecture is used in a parallel database for the efficient execution of SQL queries?

    A) Shared memory architecture
    B) Shared disk architecture
    C) Shared nothing architecture
    D) Shared cache architecture

Correct Answer: C

Detailed Solution: For shared-nothing architecture in the parallel database, tables are partitioned and distributed across multiple processing nodes and SQL optimizer handles distributed joins.

QUESTION 7:

What type of environment benefits from utility pricing?

       A) Environments with fixed demand levels

       B) Environments with limited resource scalability

       C) Environments with variable demand levels

       D) Environments with prepaid resource allocation

Correct Answer: C

Detailed Solution: Utility pricing or pay-per-use pricing benefits apply in environments with variable demand levels.

QUESTION 8:

What is the role of Neutron in the provisioning flow in OpenStack?

A) Fetches information about the whole cluster from the database
B) Publishes a message to the compute queue to trigger VM provisioning
C) Configures IP, gateway, DNS name, and L2 connectivity.
D) Contacts Cinder to get volume data

Correct Answer: C
Detailed Solution: Refer to slide 18 of OpenStack

QUESTION 9:

How does the master node in the Google File System maintain communication with chunk servers?

       A) Command messages

       B) Update messages

       C) Query messages

       D) Heartbeat messages

Correct Answer: D
Detailed Solution: In GFS, master maintains regular communication with chunk servers by Heartbeat messages

QUESTION 10:

What does the 'availability' metric represent in the monitoring and auditing of SLAs?

     A) The speed at which a service responds

     B) The percentage of uptime for a service

     C) How often the service is available

     D) The ability for a resource to grow infinitely

Correct Answer: B

Detailed Solution: Availability is represented as a percentage of uptime for a service in a given observation period.