Cloud Computing

Assignment-Week 3
TYPE OF QUESTION: MCQ/MSQ

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

QUESTION 1:

Which of the following is/are properties of Web Service SLAs?

A. SLA automation is required for negotiation, provisioning, service delivery and monitoring.

B. The QoS parameters are response time, SLA violation rate for reliability, availability and cost of service.

C. UDDI (Universal Description Discovery and Integration) is used for resource allocation.

D. The QoS parameters are related to security, privacy, trust, management, etc.

Correct Option: B, C

Detailed Answer: In Web SLA automation is not required. The QoS parameters are response time, SLA violation rate for reliability, availability and cost of service and UDDI (Universal Description Discovery and Integration) is used for resource allocation.

QUESTION 2:

A task takes time T in a uniprocessor system. In a parallel implementation, the task runs on P processors parallelly. The parallel efficiency is Eff, where 0<Eff<1. What is the time taken by each processor (M) in this implementation?

    A. $M = T$

    B. $M = T/(Eff \times P)$

    C. $M = T/P$

    D. $M = (T \times Eff)/P$

Correct Option: B

Detailed Answer: According to the question, parallel efficiency (Eff) is less than 1. Therefore, the time taken by each processor will be greater than the ideal T/P, and $M = T/(Eff \times P)$.

QUESTION 3:

Row-oriented storage is optimal for transaction processing applications.

    A. True

    B. False

Correct Option: A

Detailed Answer: From the definition of data storage techniques. (Slide no. 6 of Cloud Computing: Managing Data).

QUESTION 4:

Which of the following is/are the SLA requirement(s) for PaaS cloud delivery model?.

    A. Transparency

    B. Data Retention and Deletion

    C. Privacy

    D. Regulatory compliance

Correct Option: A, C, D

Detailed Answer: Refer to the table provided in slide no. 17 of Service Level Agreement (SLA) Lecture.

QUESTION 5:

In a cloud, total service uptime is 175 minutes and availability of the service is 0.85. What is the service downtime?

    A. 55 minutes

    B. 148.75 minutes

    C. 26.25 minutes

    D. 45 minutes

Correct Option: C

Detailed Answer: Availability = 1 – (downtime/uptime).

Downtime = Uptime×(1-Availability) = 175*(1-0.85) = 26.25 minutes.

QUESTION 6:

Which of the following database system/architecture follow(s) Quorum protocol for a large number of concurrent reads & writes?

    A. BigTable

    B. Dynamo

    C. Datastore

    D. Google File System (GFS)

Correct Option: B

Detailed Answer: Dynamo follows Quorum protocol for a large number of concurrent reads & writes.

QUESTION 7:

Match the components of OpenStack with their functions.

Table I	Table II
1. Neutron 2. Cinder 3. Keystone 4. Nova	A. Block storage B. Identity C. Compute D. Networking

    A. 1->B, 2->D, 3->A, 4->C

    B. 1->B, 2->A, 3->D, 4->C

    C. 1->C, 2->B, 3->D, 4->A

    D. 1->D, 2->A, 3->B, 4->C

Correct Option: D

Detailed Answer: Neutron is used for networking, Cinder is used for block storage, Keystone is used for identity and Nova is used for compute service.

QUESTION 8:

Let D(t) and R(t) be the instantaneous demand and resources at time t respectively. If demand is exponential ($D(t)=e^t$), any fixed provisioning interval (tp) according to the current demands will fall linearly behind.

A. TRUE

B. FALSE

Correct Option: B

Detailed Answer: If demand is exponential ($D(t)=e^t$), any fixed provisioning interval (tp) according to the current demands will fall exponentially behind.

QUESTION 9:

Which of the following statement(s) regarding OpenStack storage is/are wrong?

A. Object storage is managed by Cinder

B. Both ephemeral storage and block storage are accessible from within VM

C. Block storage persists until VM is terminated

D. Ephemeral storage is used to run operating system and/or scratch space

Correct Option: A, C

Detailed Answer: Object storage is managed by Swift. Block storage persists until specifically deleted by the user. Thus, statements A and C are false.

QUESTION 10:

Statement 1: Multiple KPIs are aggregated to SLA.

Statement 2: SLA contains SLO.

A. Both statement 1 and 2 are correct

B. Statement 1 is correct and statement 2 is incorrect

C. Statement 2 is correct and statement 1 is incorrect

D. Both statement 1 and 2 are incorrect

Correct Option: C

Detailed Answer: Multiple KPIs are aggregated to SLO. SLA contains SLO. So statement 1 is incorrect and statement 2 is correct.