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CLOUD BASED ENTERPRISE SYSTEMS (15B22CI521)

Q1. ***Company A***

Company A's IT department has a hosting platform specifically for systems used by the company's large marketing department. This platform provides critical, high-availability hosted IT resources and services. However, the IT department has started to receive complaints about the time it takes to start new marketing campaigns, primarily due to how long it takes to provision new servers within this platform. Also, as a result of a recent set of mergers and acquisitions, the consumers of the services hosted by this platform have become more distributed, with service consumers accessing services from a large variety of locations, and with increasingly different types of devices.

In response to these complaints, Company A is considering using a cloud-based hosting platform. Which specific characteristics of a cloud will be helpful for Company A to address its problems?

Company B

Company B is an IT hosting company that provides a range of shared services used by a wide variety of customers. One of Company B's customers is Company A. Specifically, Company A's marketing department has been using a service hosted by Company B's on-premise environment. The service provides functions for conducting public surveys. Recently, Company A complained about Company B's billing practices and the reliability of its hosting environment. Company B currently charges all of its customers a flat fee, regardless of how much or how frequently a given customer uses the service. Furthermore, the public survey service has been repeatedly attacked and has therefore not always been available for Company A and other customers.

In response to the complaints from Company A, Company B is considering using a cloud-based hosting platform. Which specific characteristics of a cloud will be helpful to address Company B's problems?

Q2 *Scenario #1 :*XYZ is a large real estate firm. Their core competence is their understanding of the real estate market, and their understanding of their customers and the customer needs. Their most critical tools are their CRM and email servers. They are growing, and so is their customer list and their IT and marketing costs are growing at an alarming rate. They currently use managed services to run their CRM, email, etc software but they have had to deal with significant delays as each growth spurt is bogged down by the time and cost it takes to provision new servers, install the software, test it and bring it online. Which cloud delivery model would be best suited for them?

IaaS / PaaS / SaaS

*Q3 Scenario #2:*ABC is a mid-size animation company that has historically worked on some of the major animation movies in the last few years. Their core competence is their animation engineers, and their very talented IT staff that manages their server farms and develops new versions of their custom animation software. When they are working on a particular animation sequence, their typical development cycle involves large spikes in computing and storage usage, as they render each section and each version. Over the years, as animations have become more sophisticated, these spikes have become larger and more unpredictable as they start pushing the boundaries of what is computationally possible. Consequently, they have seen their hardware and IT costs increase at a rapid rate in order to service the rendering spikes, while sitting idle the rest of the time. Which cloud delivery model would be best suited for them?

IaaS / PaaS / SaaS

Q4 Scenario #3: PTL is a relatively young high tech company that provides a specialized location based service. Their platform is relatively straightforward: Web servers, application servers, databases, JavaScript and Python. They also require connectivity to some external services such as mapping and location software. As their customer base is growing, their IT provisioning is not able to keep up. Which cloud delivery model would be best suited for them?

IaaS / PaaS / SaaS

Q5. Over the past 3 years, a cloud service has been unavailable for a total of 36 hours, primarily due to a denial of service attacks. Additionally, the physical server hosting the cloud service crashed once. It took the cloud provider 4 days to replace the physical server and for the cloud service to become operational again. Based on these statistics over the past 3 years, what is the availability rating of the cloud service? 99.49

Q6. A cloud provider is deploying a new SaaS product comprised of a cloud service. As part of the deployment, the cloud provider wants to publish a service level agreement (SLA) that provides an availability rating based on its estimated availability over the next 12 months. First, the cloud provider estimates that, based on historical data of the cloud environment, there is a 25% chance that the physical server hosting the cloud service will crash and that such a crash would 2 days before the cloud service could be restored. It is further estimated that, over the course of a 12 month period, there will be various attacks on the cloud service,resulting in a total of 24 hours of downtime. Based on these estimates, what is the availability rating of the cloud service that should be published in the SLA?

Q7. Over the past two years a cloud service consumers have made 24,531 attempts to invoke a cloud service's reporting capability. Of those attempts, 22,904 resulted in the successful execution of this capability. Based on these statistics, what is the reliability rating of the cloud service's reporting capability?