

TIME: 3 HOURS

05/12/2015

MAX. MARKS: 50

Instructions to candidates

- Answer any **FIVE FULL** questions.
- Missing data, if any, may be suitably assumed.

- 1A. Explain each block of NIST Reference Security Architecture of Cloud Computing with proper diagram.
- 1B. How globalization, acquisition and application explosion are the challenges of IT infrastructure?
- 1C. Draw schematic diagram of port and port groups in Virtual Switch.

(5+3+2)
- 2A. What is the Hypervisor? Explain Bare Metal and Hosted Hypervisor in detail with two examples of each.
- 2B. Explain the following with suitable examples

i) Economics of Cloud
 iii) Enterprise Service Bus

ii) Information as a Service
- 2C. Bring out the two main differences between RDS and VDI.

(5+3+2)
- 3A. Jeevan is planning to start a new small scale business in IT. He has recently got three projects, two government projects on analysis of corruption and one private MNC project. As he was developing some web applications on his own, he was able to manage. But since the requirements have increased he is planning to hire some IT people and also planning to create a small infrastructure at his home. Meantime Jeevan's friend Satish has suggested the option of public cloud for different requirements. Now Jeevan is in a dilemma whether to go for own infrastructure or Cloud. Suggest the pros and cons of cloud computing for expanding Jeevan's business. Also list down risk and convenience parameters which will help to handle issues at his own.
- 3B. How hyperjacking can be performed in Cloud computing? Explain security measures for the same.
- 3C. The data is transferring in a cloud between two hosts at 10am with an average rate of 10Kbps bandwidth. After one minute bandwidth is increased more than an average rate to 20Kbps. Further at 10:12am for three minutes bandwidth at peak say 60Kbps. What is the burst size at 10:14am? So how long the burst can stay if the data rate is 5.0Kbps?

(5+3+2)
- 4A. How memory resources optimization can be achieved in compute virtualization?
- 4B. With neat block diagram explain the SaaS Delivery model.
- 4C. Specify two approaches to secure storage in cloud computing.

(5+3+2)
- 5A. What is REST? Explain the use of REST with suitable example. Write REST Request and Response code to get the details of Book (Book Name, Author, Publication, Year) by providing Book Id.
- 5B. The cost of designing, building and testing the API for the "Weather Forecasting" service is Rs. 30000/-. The cost of downtime is Rs. 500/- per month, the cost of on-going maintenance is Rs. 2000/- per month and the cost of data subscription is Rs. 1000/- per month. The onetime cost of Web API is Rs. 2000/- and on-going cost of Web API Rs. 900/-. Find the savings of "Weather Forecasting" service for one-time cost and on-going cost.
- 5C. Define Storm. How does storm control prevent regular VLAN traffic from being disrupted by storm?

(5+3+2)

- 6A. Explain following processes in Cloud Service Management with appropriate example.
- i) Incident Management
 - ii) Finance Management
 - iii) Performance Management
 - iv) Capacity Management
 - v) Availability Management
- 6B. List out different Single Point of Failures (SPoF) in Cloud. How SPoF can be eliminated to achieve business continuity?
- 6C. Organization wants to migrate application and data from Data Center to Cloud, where organization looking for subscribing to SaaS based delivery model and creating a database server for copying database on the Cloud. Suggest Code and Data Migration strategy for the same.

(5+3+2)
