

Code No: R42124

R10

Set No. 1

IV B.Tech II Semester Regular Examinations, April/May - 2014

CLOUD COMPUTING

(Information Technology)

Time : 3 hours

Max. Marks: 75

**Answer any Five Questions
All Questions carry equal marks**

- 1 a) What is Operating System level virtualization? What are the pros & cons of it? [8]
b) Explain the differences between hypervisor & para-virtualization. [7]
- 2 a) What are the challenges in the cloud architecture development? [8]
b) How does the cloud computing cost model reduce the cost when compared to Traditional IT cost model? Comment [7]
- 3 What is a data center? What significant benefits can be achieved by virtualizing data? What are the disadvantages? [15]
- 4 a) How is network intrusion detection implemented in cloud? [8]
b) "A firewall protects the perimeter". Explain How? [7]
- 5 In security as service, What are the requirements of the following?
a) Web Security
b) Email Security
c) Network Security [15]
- 6 What is Google App Engine? What are its features? What are the services provided by App Engine? [15]
- 7 Under disaster management,
a) What things have to be monitored?
b) How is database recovery done?
c) How is load balancer recovery done? [15]
- 8 a) Give the architecture and explain its components. [8]
b) Comment on Xen paravirtualization for virtual memory management. [7]

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Set No. 2

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(Information Technology)

Time : 3 hours

Max. Marks: 75

**Answer any Five Questions
All Questions carry equal marks**

- 1 a) At what operational levels can virtualization be implemented? Explain. [8]
b) Give the data model for virtualization. Explain. [7]
- 2 a) What are the different cloud infrastructure models? Give some examples. [8]
b) Compare cloud based IT Vs internal IT & Managed services with respect to capital investment, cost, time flexibility & reliability. [7]
- 3 a) Give a brief analysis of the energy use by data centers. [8]
b) What are the reasons for moving onto cloud? [7]
- 4 a) Discuss the main security threats for the SaaS cloud delivery on a public cloud. [8]
b) What is trust in the context of cloud computing? [7]
- 5 a) Comment on the security and reliability in storage as service. [8]
b) Write short note on Amazon Simple Storage Service. [7]
- 6 Give the structure of the IaaS delivery model. Explain in detail the characteristics of IaaS. [15]
- 7 Comment on
a) Geographic redundancy
b) Organizational redundancy [15]
- 8 a) Discuss about the programming support provided by Amazon. [8]
b) Give the architecture of Nimbus, and explain its features, [7]

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(Information Technology)

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Max. Marks: 75

Answer any Five Questions

All Questions carry equal marks

- 1 Describe the concept of:
a) Host based virtualization b) Full Virtualization c) Para Virtualization [15]

- 2 Define and distinguish among the following terms on scalability:
a) Resource scalability
b) Scalability over machine size
c) Scalability over problem size [15]

- 3 a) What is meant by software licensing? What are the issues related to software licensing? [8]
b) What is a service level agreement? What objectives are defined under SLA? [7]

- 4 a) What is meant by system hardening? What criteria should be met by the hardened system? [8]
b) What is meant by Host Intrusion Detection (HID)? In what way the cloud network use the centralized HID? [7]

- 5 What is Database as Service? Describe the DBaaS architectures- Business, Application & Information Architectures in detail. [15]

- 6 Briefly describe about Platform as service. Compare the cloud computing delivery models PaaS & IaaS from the point of view of application developers and users. [15]

- 7 Describe the backup plan for fixed data, transient data, configuration data & persistent data. [15]

- 8 a) How is Eucalyptus used for virtual networking of a private cloud? [8]
b) Give a comparison of Eucalyptus, Open Nebula & Nimbus. [7]

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Set No. 4

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CLOUD COMPUTING

(Information Technology)

Time : 3 hours

Max. Marks: 75

**Answer any Five Questions
All Questions carry equal marks**

- 1 a) Comment on the evolution of Service Oriented Architecture. [8]
b) What are the differences between traditional & On demand scaling approaches? [7]
- 2 a) Describe the characteristics of cloud computing systems. [8]
b) What is meant by scalable computing over the internet? Explain. [7]
- 3 a) List out the Virtual Infrastructure managers and Operating Systems for virtualizing data centers. [8]
b) What constitutes availability? How is availability estimated? [7]
- 4 a) What security measures should be taken by the user while storing the data on a cloud? [8]
b) How is the concept of a firewall rule in the Amazon cloud different from that in a traditional data center? [7]
- 5 Comment on the growing complexity of Information. What are the benefits of Information as service? What is the role of Cloud in Information as Service? [15]
- 6 Explain about Amazon Elastic Compute Cloud. What are its features? [15]
- 7 Describe how the two key metrics Recovery Point Objective(RPO) & Recovery Time Objective(RTO) can be determined for disaster recovery in cloud? [15]
- 8 What is a private cloud? Mention some of the open source cloud computing platforms. Explain any one in detail. [15]