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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

SEMESTER END EXAMINATIONS – JUNE 2015

Course & Branch	:	**M.Tech.-Computer Science & Engg./ Computer Network Engg.**	**Semester**	:	**II**
Subject	:	**Cloud Computing**	**Max. Marks**	:	**100**
Subject Code	:	**MCSEE30/MCNEE30**	**Duration**	:	**3 Hrs**

Instructions to the Candidates:

- Answer one full question from each unit.

UNIT – I

1.	a)	List the most obvious major obstacles faced by Cloud Computing.	(06)
	b)	List and write the difference between the three delivery models of cloud .	(09)
	c)	Discuss the Objectives of the Service – and compliance - level agreement.	(05)
2	a)	List any four methods to reduce energy consumption in cloud computing.	(04)
	b)	Devise a side by side comparison of OpenNebula and Nimbus based on Design, Cloud type, User population, Applications, Customizability, Internal Security, User access and Network access.	(08)
	c)	Identify and explain any four PaaS and SaaS offered by Google.	(08)

UNIT – II

3.	a)	Identify and Explain the basic workflow patterns with a neat diagram.	(10)
	b)	What is ZooKeeper . Mention services guaranteed by it and its API operation.	(10)
4.	a)	Define task and its attributes in a workflow model, explain the different types of tasks in detail .	(10)
	b)	Summarize the details of the workflow steps of GrepTheWeb produced by Amazon with a neat diagram.	(10)

UNIT – III

5.	a)	Define virtualization. List the important role played by virtualization in cloud computing.	(06)
	b)	Write the difference between paravirtualization and full virtualization. With examples and a neat diagram.	(06)
	c)	Examine the problems faced by virtualization of x86 architecture.	(08)
6.	a)	Can virtualization empower the creators of malware? What is the minimal danger detected in virtualization. What are the means to prevent the darker side?	(06)
	b)	List the questions to be examined and draw conclusion for performance comparison of VMs.	(06)
	c)	With a Neat diagram point out the interfaces among the software and hardware components. Mention the use of layering and virtualization.	(08)

UNIT – IV

a) Explain in detail the feedback control based on dynamic thresholds. (10)

b) List and explain the policies and mechanism for cloud resource management. (10)

8. a) Write the expression and condition that has to be satisfied for max-min criterion for fair allocation and CPU scheduling. (04)

b) Write the properties of the pricing and Allocation algorithm and constraints for a combinatorial auction algorithm. (08)

c) Define the objective of Borrowed Virtual time a scheduling algorithm for computing cloud and describe the policy it follows . (08)

UNIT – V

9. a) List the most important aspects of Google File System design . (06)

b) List the NFS designers aim and discuss the important characteristics of UFS. (07)

c) Define Lock and different types of Locks. Differentiate each lock based on their usage and function. (07)

10. a) Explain the distributed algorithm for Trust Management in cognitive Radio networks. (10)

b) List the advantages of a centralized history based algorithm for bandwidth management in CRN over distributed algorithm. (06)

c) Draw the architecture of a cloud based architecture to optimize the routing and placement of components on an FPGA. (04)

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