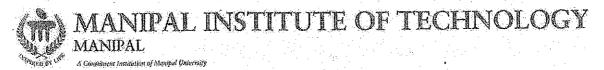
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VI SEMESTER B.TECH. (INFORMATION TECHNOLOGY/COMPUTER AND COMMUNICATION ENGINEERING)

END SEMESTER EXAMINATIONS, APRIL/MAY 2017

SUBJECT: PROGRAM ELECTIVE III - CLOUD COMPUTING [ICT 4017]

REVISED CREDIT SYSTEM (29/04/2017)

MAX. MARKS: 50 Time: 3 Hours Instructions to Candidates: Answer ALL questions. * Missing data, if any, may be suitably assumed. With a neat diagram explain the techniques that support memory over-commitment 1A. in hypervisor. Explain the different phases involved in building the cloud infrastructure. 3 1B. 2 Write the significance of the following in the cloud environment 1C. Enterprise Service Bus Raw Device Mapping ii. Write a Python/Java program to display the welcome message along with current 5 2A. time for developing and hosting web application in Google App Engine. An organization is experiencing tremendous data growth, which increased their 3 2B. storage requirements. Buying more high-end storage is not a cost-efficient solution for them. They require a solution at an optimal cost that enable storing the right data, at the right cost, with the right access. Identify and explain a solution to address this

3A. What is the significance of virtual infrastructure management? With a suitable example explain the key functions of unified management software to create cloud services.
3B. The data transferring in a cloud between two hosts at 10AM with an average rate of

With a suitable example explain how cloud provides Hadoop as a Service.

3B. The data transferring in a cloud between two hosts at 10AM with an average rate of 12Kbps bandwidth. After one minute bandwidth is increased more than an average rate to 20Kbps. Further at 10:12AM for three minutes bandwidth at peak 30Kbps. What is the burst size at 10:14AM? So how long the burst can stay if the data rate is 3.0Kbps?

3C. Commoditization has influenced the development and implementation of the cloud computing paradigm. Justify your answer.

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2C.

4A.	== · · · · · · · · · · · · · · · · · ·	- 5
	diagram for the scenario given below to demonstrate VLAN trunking.	
	Consider a scenario where an organization has three physical servers with hypervisor.	
	Virtual machine VM1, VM2, and VM3 reside in a physical server PS1, virtual	
•	machine VM4 and VM5 are hosted on physical server PS2 and virtual machine VM6	·
	is placed on physical server PS3. Each physical server has a virtual switch. These virtual switches are connected to a common physical switch to enable network traffic	
	flow between them. VMs are connected to the respective virtual switches. The	
	organization has to set up four functional groups, each group with unique VLAN ID.	
	Marketing group: Includes VM1, VM4 and VM6	
	Production group: Includes VM2, VM3 and VM6	
	Service group: Includes VM2 and VM5	
	Finance group: Includes VM3	
4B.	With the suitable example explain how cloud governance help user and cloud service provider.	3
4C.	With a neat diagram explain desktop and application virtualization.	2
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5A.	How multi-tenancy is a key security concern in cloud? Explain any four key security threats and its mitigation techniques for cloud infrastructure.	-5
5B.	What are the different modes of virtual machine migration between servers?	3
5C.	Explain any four essential assessments that should be carried out by an organization	2

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