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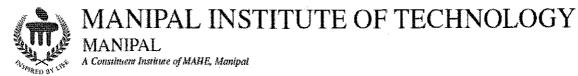
VI SEMESTER B.TECH. (INFORMATION TECHNOLOGY/COMPUTER AND COMMUNICATION ENGINEERING)

MAKE UP EXAMINATIONS, JUNE 2018

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

REVISED CREDIT SYSTEM
(22/06/2018)

Time: 3 Hours   MAX. MARKS: 50

Instructions to Candidates:

❖ Answer **ALL** questions.

❖ Missing data may be suitably assumed.

1A.	With a neat diagram explain the various components that are required to build the cloud infrastructure?	**5**
1B.	Give any three difference between grid and cloud computing.	**3**
1C.	Consider a virtual machine configured with 50% share and 10 GB memory limit. If a 2 GB swap file got created on data store when the virtual machine is powered on, calculate the size of 'reservation' that was configured?	**2**
2A.	Define storage virtualization. With a neat diagram explain how storage virtualization is implemented at compute and storage layers.	**5**
2B.	Write a pseudo code which helps the Google App Engine to understand and handle a deployed application.	**3**
2C.	Why most mature SOA implementations favor orchestration over choreography?	**2**
3A.	List the key components of Physical to Virtual Machine (P2V) Converter. With the help of a neat diagram, explain the working of cold conversion process.	**5**
3B.	With a neat diagram explain desktop and application virtualization.	**3**
3C.	What are the significance of service catalogue management and its attributes in cloud?	**2**
4A.	With a neat diagram explain different methods to migrate virtual machines in the cloud environment	**5**
4B.	Demonstrate the network connectivity and traffic flow in the virtual environment when a physical server uses PNIC and FC/iSCSI HBA to connect client and storage	**3**

array respectively.

4C. What is burst size in network traffic management techniques? Calculate the burst size 2
if average bandwidth is 1Kbps and peak bandwidth is 4 Kbps.

5A. Explain why Velocity of Attack and Multi-tenancy are the cloud security concerns? 5

5B. How Defence-in-Depth and Trusted Computing Base help in designing a security 3
framework for an information system?

5C. Mention any four advantages of CloudSim 2