Roll No. _____   Section _____

National University of Computer and Emerging Sciences, Lahore Campus

	Course:	Introduction to Cloud Computing	Course Code:	CS-499
	Program:	Computer Science	Semester:	Fall 2017
	Duration:	180 Minutes	Total Marks:	110
	Paper Date:	18-Dec-17	Weight	40%
	Section:	N/A	Page(s):	3
	Exam:	Final	Reg. No.	

Instruction/Notes:	Please answer all the questions (including multiple choice) on the answer book provided.

1- The automated ability of a cloud to transparently scale IT resources, as required in response to runtime conditions or as pre-determined by the cloud consumer or cloud provider is called:

   a-Resiliency

   b-Measured Usage

   c-Elasticity

   d-Multitenancy

Marks 2

2-An architectural model based on a system of predefined scaling conditions that trigger the dynamic allocation of IT resources from resource pools is called:

   a- Resource Pooling Architecture

   b- Dynamic Scalability Architecture

   c-Workload Distribution Architecture

   d-Redundant Storage Architecture

Marks 2

3- We get the module availability with which of the following formula:

MTTF: mean time to failure

MTTR: mean time to repair

   a- (MTTF +MTTR)

   b- (MTTF +MTTR)/ MTTF

   c- MTTF / (MTTF +MTTR)

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Marks 2

4-Google uses (select the correct answer)

a- Global distributed File System(GFS)

b- Network Attached Storage (NAS)

Marks 2

5- Which of the following consumes the most power in Warehouse scale computing:

a- DRAM

b- Disks

c- Networking

d-CPUs

Marks 2

6- A cloud consumer that requests the installation, configuration, and updating of twentyfive Windows servers with several applications requires that half of the applications be identical installations, while the other half be customized. Each operating system deployment can take up to 30 minutes, followed by additional time for security patches and operating system updates that require server rebooting. The applications finally need to be deployed and configured. Using a manual or semi-automated approach requires excessive amounts of time, and introduces a probability of human error that increases with each installation.

- Explain in detail how you could provide a cloud based system to automate the above mentioned requirement.

- Give details of the cloud architecture you would implement.

- Draw a diagram to help explain your answer.

Marks 30

7- Write code in Apex to create an account which should have the following name: 'Habib Bank Ltd'.

Write SOQL (Salesforce Object Query Language) which will return the Account you just created with the name 'Habib Bank Ltd'. You can use the name in the SOQL.

Marks 20

8- Describe and explain what the following mechanisms are and how are they used in cloud computing:

   a- Hypervisor

   b- Load Balancer

   c- Multi-Device Broker.

Marks 30

9-What are Warehouse Scale Computers? Give an Architectural overview of WSC.

Marks 10

10-Information Risk Management is the act of aligning exposure to risk and capability of managing it with the risk tolerance of the data owner. Give five recommendation for 'Information Risk Management'

Marks 10