Register Number:……………

M.E DEGREE EXAMINATIONS: MAY 2016

(Regulation 2015)

Second Semester

COMPUTER SCIENCE AND ENGINEERING

P15CSTE02: Cloud Computing

COURSE OUTCOMES

CO1: Outline cloud computing paradigm and its various forms of services.

CO2: Identify the architecture, infrastructure and delivery models of cloud computing.

CO3: Apply suitable virtualization concept.

CO4: Analyze various cloud security and current trends in Resource Allocation.

CO5: Discover the appropriate technologies, algorithms, Programming Models and approaches for the Related issues.

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1. Which of the following is most important area of concern in cloud computing ?   CO1   [K_1]

   a) Scalability   b) Security

   c) Dependability   d) Storage

2. A service that concentrates on hardware follows the _____ as a Service model.   CO1   [K_1]

   a) IaaS   b) CaaS

   c) PaaS   d) SaaS

3. ------------is the ability to run a virtual machine manager on top of another virtual   CO2   [K_2]

   machine manager

   a) Hybrid virtualization   b) Full virtualization

   c) Recursive virtualization   d) Paravirtualization

4. Match the following: CO4   [K_2]

List I	List II
A. Best Service Model	i. Hadoop
B. CaaS	ii. Virtualization
C. Pooling and sharing of resources	iii.Paas
D. DFS	iv. Communication

a)	A-iii, D-i, C-ii and B-iv	b)	A-iii, D-i, C-iv and B-ii	
c)	A-iii, D-ii, C-i and B-iv	d)	A-ii, D-i, C-iii and B-iv	

5. Apache ------ is a collection of software projects for reliable and scalable distributed computing. CO4 [K2]

    a) Mapreduce   b) Hadoop

    c) Pig   d) Hive

6. Which of the following cloud concept is related to pooling and sharing of resources? CO2 [K2]

    a) Polymorphism   b) Abstraction

    c) Virtualization   d) Encapsulation

7. Assertion (A): Cloud concept is related to pooling and sharing of resources CO3 [K2]

   Reason (R): Cloud uses Virtualization as fundamental concept

    a) A is true and R is the correct reason   b) A is true but R is not the correct reason

    c) A is false and R is the correct   d) A is false and R is not correct

8. Virtualization layer exist between CO3 [K2]

    a) Hardware and VM   b) Hardware and VMM

    c) Hardware and OS   d) Hardware and Application

9. Which of the following cannot be installed on VM? CO5 [K4]

    a) Firewall   b) OS

    c) Application   d) File System

10. Which does allow the development and deployment of application? CO5 [K4]

    a) GAE   b) Hypervisor

    c) Virtual machine monitor   d) Service provider

PART B (10 x 2 = 20 Marks)

11.	State the advantages and disadvantages of cloud computing	CO1	[K1]
12.	Compare parallel and distributed computing	CO1	[K1]
13.	What is Xen? Discuss its elements for virtualization.	CO4	[K2]
14.	Classify the work flow applications with task dependencies	CO2	[K2]
15.	Define frameworks for task computing	CO3	[K2]
16.	What is the requirement of virtualization platforms in implementing cloud?	CO3	[K2]
17.	Discuss the private deployment of Open Nebula Clouds	CO4	[K2]
18.	What are the limitations of the Thread Programming Model?	CO2	[K2]
19.	How identity management helps CSPs?	CO5	[K4]
20.	How VM migration helps in load balancing?	CO5	[K4]

PART C (6 x 5 = 30 Marks)

21.	Explain different Types of Clouds with neat sketch	CO1	[K$_1$]
22.	Mention the features of Federated cloud computing	CO2	[K$_2$]
23.	Explain hardware assisted CPU virtualization and compare with full virtualization.	CO3	[K$_2$]
24.	Explain VM creation and allocation in EUCALYPTUS.	CO4	[K$_2$]
25.	Explain cloud computing security architecture in detail.	CO5	[K$_4$]
26.	Write short note on resource management in OpenStack	CO4	[K$_2$]

Answer any FOUR Questions
PART D (4 x 10 = 40 Marks)

27.	Discuss the various design challenges in cloud.	CO1	[K$_1$]
28.	Explain NIST Architecture in detail.	CO2	[K$_2$]
29.	Explain the concept of data centre automation virtualization.	CO3	[K$_2$]
30.	Explain the architecture of map reduce and data flow in running map reduce at various job trackers in detail.	CO4	[K$_2$]
31.	How dynamic resource allocation is managed using Virtual machines? Discuss.	CO5	[K$_4$]

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