Enrollment No......................................

Faculty of Engineering
End Sem (Odd) Examination Dec-2022
CA5EL50 Cloud Computing

Programme: BCA+MCA   Branch/Specialisation: Computer
(Integrated)/MCA   Application

Duration: 3 Hrs.   **Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d.

Q.1 i.   Which of the model involves the special types of services that   **1**
           users can access on a cloud computing platform?
           (a) Service   (b) Deployment
           (c) Application   (d) Programming

     ii.   Which one of the following is used as SaaS-   **1**
           (a) AWS   (b) Google docs
           (c) Go grid   (d) Azure

     iii. Which is not a disadvantage of private cloud-   **1**
           (a) Additional skills
           (b) Restricted area of operations
           (c) More Control
           (d) Limited Scalability

     iv.   Haas is sometimes also called-   **1**
           (a) PaaS   (b) IaaS   (c) SaaS   (d) Cloudware

     v.   _____ maps input key-value pairs to a set of intermediate   **1**
           key-value pairs.
           (a) Mapper   (b) Reducer
           (c) Both (a) and (b)   (d) None of these

     vi.   The machine on which the virtual machine is going to create is   **1**
           known as-
           (a) Client machine   (b) Guest machine
           (c) Host machine   (d) None of these

                                                                    P.T.O.

vii. Which of the following mechanisms are contained by Cloud API **1**
for accessing cloud services?
(a) Abstraction   (b) Authentication
(c) Replication   (d) All of these

viii. Developing secure software is based on applying- **1**
(a) The secure software design principles
(b) Encapsulation
(c) Virtualization
(d) None of these

ix. HDFS stands for- **1**
(a) Hadoop Distributed File System
(b) Hadoop Database File System
(c) Hadoop Database File Storage
(d) Hadoop Distributed File Storage

x. Which of the following methods is helpful for notifying customers **1**
about data breaches?
(a) Identity and access management
(b) Data Encryption
(c) Event logging
(d) Network monitoring

Q.2   Attempt any two:
i. Define cloud computing. What are the benefits of adopting cloud **5**
computing?
ii. Write a short note on- **5**
(a) Grid computing   (b) Distributed computing
iii. What are the major characteristics of cloud computing as per **5**
NIST.

Q.3   i. List some of the challenges in cloud computing. **3**
    ii. What is NIST service models? Discuss the advantage and **7**
disadvantage of each service model.
OR   iii. Which are the basic components of IaaS based solution for cloud **7**
computing? Explain.

Q.4   i. What is map reduce? Explain the paradigm of map reduce. **4**
    ii. Discuss different types of virtualizations. **6**
OR   iii. Describe cloud resilience with benefits of cloud resilience. **6**

Q.5   i. What is cloud security? Explain the different attributes of cloud **4**
security.
    ii. What do you understand by confidentiality, integrity and **6**
availability in relation with information system security? Explain.
OR   iii. Discuss the cloud design principles of cloud computing. **6**

Q.6   Attempt any two:
i. What are the three different levels expressing the concept of **5**
InterCloud /Cloud Federation?
ii. What is third party cloud service? Give some examples. **5**
iii. What do you understand by Market-Oriented Cloud computing? **5**
What are the main components that implement a MOCC – based
system?

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Marking Scheme
CA5EL50 Cloud Computing

Q.1	i)	a) Service		1
	ii)	b) Google docs		1
	iii)	c) More Control		1
	iv)	b) IaaS		1
	v)	a) Mapper		1
	vi)	c) Host machine		1
	vii)	b) Authentication		1
	viii)	a) The secure software design principles		1
	ix)	a) Hadoop Distributed File System		1
	x)	c) Event logging		1

Q.2	i.	Definition of Cloud computing	2 Marks	5
		Benefits of Cloud computing	3 Marks	
	ii.	i) Grid computing	2.5 Marks	5
		ii) Distributed computing	2.5 Marks	
OR	iii.	At least 5 characteristics	1 Mark	5
			(1 Mark*5)	

Q.3	i.	1. Cloud interoperability & standards	1 Mark	3
		2. Scalability & fault tolerance	1 Mark	
		3. Security, trust and privacy	1 Mark	
	ii.	NIST Service model	3 Marks	7
		Advantages	2 Marks	
		Disadvantages	2 Marks	
OR	iii.	Three layers (user interface, infrastructure management software,		7
		Physical infrastructure) components	5 Marks	
		Diagram	2 Marks	

Q.4	i.	Definition	1 Marks	4
		Paradigm of MapReduce	3 Marks	
	ii.	Types: Server virtualization, Hardware virtualization, OS virtualization, Storage virtualization, Network virtualization, Application virtualization		6
			1 Mark each	
			(1 Mark*6)	

OR	iii.	Cloud Resilience	2 Marks	6
		Benefits	4 Marks	
Q.5	i.	Definition of Cloud Security	2 Marks	4
		Attributes	2 Marks	
	ii.	Meaning of: Confidentiality	2 Marks	6
		Integrity	2 Marks	
		Availability	2 Marks	
OR	iii.	At least 6 principles	1Mark each	6
			(1 Mark*6)	

Q.6		Attempt any two:		
	i.	Conceptual	2 Marks	5
		Logical & Operational	2 Marks	
		Infrastructural	1 Mark	
	ii.	Definition	1 Mark	5
		At least two examples	2 Marks each	
			(2 Marks*2)	
	iii.	Market Oriented Cloud Computing	2 Marks	5
		Components	3 Marks	

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