

Enrollment No.....



Faculty of Engineering  
End Sem Examination May-2023  
IT3CO23 Cloud Computing

Programme: B.Tech.

Branch/Specialisation: IT

**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. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Gmail is an example of- **1**  
(a) SAAS (b) IAAS (c) PAAS (d) All of these
- ii. Which of the following cloud concept is related to pooling and sharing of resources? **1**  
(a) Polymorphism (b) Abstraction  
(c) Virtualization (d) None of these
- iii. CAPEX refers to- **1**  
(a) Capital exclusion (b) Capital elimination  
(c) Capital escalation (d) Capital expenditure
- iv. In a \_\_\_\_\_ scheme, the VM is installed as a Type 1 Hypervisor directly onto the hardware. **1**  
(a) Paravirtualization (b) Full virtualization  
(c) Emulation (d) None of these
- v. SaaS supports multiple users and provides a shared data model through \_\_\_\_\_ model. **1**  
(a) Single-tenancy (b) Multiple-instance  
(c) Multi-tenancy (d) All of these
- vi. SLA Stands for- **1**  
(a) Service level agreement (b) Security level agreement  
(c) System local area (d) Service local area
- vii. Which one of the following refers to the non-functional requirements like disaster recovery, security, reliability, etc? **1**  
(a) Service Development (b) Quality of service  
(c) Plan Development (d) Technical Service

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- viii. Which of the following is done by Identity management? **1**  
 (a) Controlling access to data in the cloud  
 (b) Maintaining user roles  
 (c) Preventing unauthorized uses  
 (d) All of these
- ix. Which of these options is not a PaaS offering? **1**  
 (a) IBM App Mix  
 (b) Azure App Service  
 (c) AWS Elastic Beanstalk  
 (d) Google App Engine
- x. Which of the following features regarding Google App Engine is correct? **1**  
 (a) Open & flexible  
 (b) Support for popular programming languages  
 (c) Monitoring, logging & diagnostics  
 (d) All of these
- Q.2 i. What is cloud computing? Write its characteristics as per NIST. **4**  
 ii. Draw cloud reference architecture along with its components. **6**
- OR iii. What is cloud computing deployment model? Explain different types of cloud computing deployment models. **6**
- Q.3 i. What is Hypervisor in cloud computing also explain its types? **4**  
 ii. Discuss cloud service management in detail with relevant diagram. **6**
- OR iii. Compare full & para virtualization in detail. **6**
- Q.4 i. Differentiate between Platform as a Service and Infrastructure as a Service? **3**  
 ii. Clarify the role of SLA in cloud system with working of SLA life cycle. Explain using diagram. **7**
- OR iii. Illustrate business continuity plan with relevant diagram. **7**
- Q.5 i. Explain cloud security architecture with block diagram? **4**  
 ii. Define virtualized security. What are the different types of virtualized security? **6**
- OR iii. Explain role of identity management and access control mechanism in cloud. **6**

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- Q.6 Write short note on any two: **5**  
 i. Role of Xen Hypervisor **5**  
 ii. Amazon web service cloud platform **5**  
 iii. Open Stack **5**

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**Marking Scheme**  
IT3CO23 [T] -Cloud Computing

Q.1	i)	(a) SAAS		<b>1</b>
	ii)	(c) Virtualization		<b>1</b>
	iii)	(d) Capital Expenditure		<b>1</b>
	iv)	(b) Full virtualization		<b>1</b>
	v)	(c) Multi-tenancy		<b>1</b>
	vi)	(a) Service level agreement		<b>1</b>
	vii)	(b) Quality of service		<b>1</b>
	viii)	(d) All of these		<b>1</b>
	ix)	(a) IBM App Mix		<b>1</b>
	x)	(d) All of these		<b>1</b>
Q.2	i.	Cloud Computing	2 Marks	<b>4</b>
		Characteristics	2 Marks	
	ii.	Diagram cloud reference architecture	3 Marks	<b>5</b>
		Components	2 Marks	
OR	iii.	Cloud deployment model	1 Mark	<b>5</b>
		Cloud deployment models	1 Mark each	
Q.3	i.	Hypervisor	2 Marks	<b>4</b>
		Types	2 Marks	
	ii.	Cloud service management	4 Marks	<b>6</b>
		Diagram	2 Marks	
OR	iii.	Comparison 6 points	1 Mark each	<b>6</b>
Q.4	i.	Difference 6 points	3 Marks	<b>3</b>
	ii.	Role of SLA	3 Marks	
		working of SLA life cycle	3 Marks	<b>7</b>
		Diagram	1 Mark	
OR	iii.	Business Continuity Plan explanation	6 Marks	<b>7</b>
		Diagram	1 Mark	
Q.5	i.	Cloud Security Architecture	3 Marks	<b>4</b>

OR	ii.	Diagram	1 Mark	<b>6</b>
		Virtualized security	3 Marks	
	iii.	Types	3 Marks	<b>6</b>
		Role of Identity Management	3 Marks	
Q.6		Role of Access Control Mechanism	3 Marks	
	i.	Role of Xen Hypervisor	5 Marks	<b>5</b>
	ii.	Amazon web service cloud platform	5 Marks	<b>5</b>
	iii.	Open Stack	5 Marks	<b>5</b>

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