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

Faculty of Engineering / Science

End Sem Examination Dec 2024

CS3EL12 / BC3EL05 Cloud Computing

Programme: B.Tech./B.Sc.   Branch/Specialisation: CSE All

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.

			Marks	BL	PO	CO	PSO
Q.1	i.	Cloud is a parallel and distributed computing system consisting of a collection of inter-connected and virtualised computers defined by- (a) NIST (b) Buyya (c) Berkeley (d) Whatis.com	1	1	1	1	1
	ii.	The ability to apply a quantifiable methodology that allows for the basis of an adaptive introspection with in a real time infrastructure- (a) Scalability (b) Reliability (c) Elasticity (d) Portability	1	1	1	1	1
	iii.	A group of separate hosts can be tied together and represented to guests as a single virtual host is called- (a) Association (b) Join (c) Aggregation (d) None of these	1	1	2	1	1
	iv.	A service model in which data analytics and business intelligence (BI) processes take place on vendor-managed infrastructure rather than a company's on premise servers- (a) Cloud provider (b) Third party (c) Cloud analytics (d) None of these	1	1	2	1	1

v.	A method of offsite data storage in which files, folders, or the entire contents of a hard drive are regularly backed up by a service vendor is called- (a) VDI (b) BAAS (c) DRAAS (d) None of these	**1**	1	3	1	1

| vi. | It involves replication and hosting of physical or virtual servers by the provider, to provide failover in the event of a natural disaster, power outage, or other disaster that affects business continuity.
(a) DAAS (b) DRAAS
(c) BAAS (d) None of these | **1** | 1 | 3 | 1 | 1 |

| vii. | Which of the following service provider provides the least amount of built in security?
(a) SAAS (b) PAAS
(c) IAAS (d) All of these | **1** | 1 | 4 | 1 | 1 |

| viii. | Which one is correct key security concept?
(a) Integrity
(b) Availability
(c) Confidentiality
(d) All of these | **1** | 1 | 4 | 1 | 1 |

| ix. | _____ serves as a PaaS vendor within Google App Engine system.
(a) Google (b) Amazon
(c) Microsoft (d) Azure | **1** | 1 | 5 | 1 | 1 |

| x. | Which uses platform and software as a service?
(a) AWS
(b) Google Chrome
(c) Hypervisor
(d) Open stack | **1** | 1 | 5 | 1 | 1 |

Q.2	i.	Enlist and explain the requirements that need to be considered for cloud services.	**2**	3	1	1,3	1,2
	ii.	Differentiate Software as a service and Platform as a service.	**3**	2	1	3	1,4
	iii.	How to do ECG analysis using the cloud? Explain with a diagram.	**5**	3	1	3	4

| OR | iv. | Define cloud deployment model with suitable diagram and working. | **5** | 2 | 1 | 3,6 | 4 |

Q.3	i.	How dual boot is different from virtualization? Explain it.	**2**	1	2	1,3	4
	ii.	Write short note on- (a) Cloud interoperability (b) Cloud broker	**8**	2	2	3	4
OR	iii.	Describe different component of cloud architecture with neat diagram.	**8**	3	2	6	4

Q.4	i.	Differentiate VDI and DAAS.	**3**	3	3	1,3	2
	ii.	How BAAS is useful for ease of recovery, affordability services in a cloud environment?	**7**	1,2	3	3	4
OR	iii.	Briefly explain the lifecycle of SLA with suitable diagram and working.	**7**	3	3	3	4

Q.5	i.	Explain cloud computing security architecture with neat diagram.	**4**	3	4	3	4
	ii.	List various security issues in cloud. Explain each of them with diagram and example.	**6**	1,3	4	6	4
OR	iii.	Define the following in brief: (a) Vulnerability assessment (b) IAM	**6**	1	4	6,7	4

Q.6		Write short note on any two:					
	i.	AWS	**5**	3	5	3	4
	ii.	Xen hypervisor	**5**	3	5	3	2,4
	iii.	Open stack	**5**	3	5	3	4

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Marking Scheme
CS3EL12 / BC3EL05 Cloud Computing

Q.1 i. Cloud is a parallel and distributed computing system consisting of a collection of inter-connected and virtualised computers defined by- **1**
(b) Buyya

ii. The ability to apply a quantifiable methodology that allows for the basis of an adaptive introspection with in a real time infrastructure- **1**
(c) Elasticity

iii. A group of separate hosts can be tied together and represented to guests as a single virtual host is called- **1**
(c) Aggregation

iv. A service model in which data analytics and business intelligence (BI) processes take place on vendor-managed infrastructure rather than a company's on premise servers- **1**
(c) Cloud analytics

v. A method of offsite data storage in which files, folders, or the entire contents of a hard drive are regularly backed up by a service vendor is called- **1**
(b) BAAS

vi. It involves replication and hosting of physical or virtual servers by the provider, to provide failover in the event of a natural disaster, power outage, or other disaster that affects business continuity. **1**
(b) DRAAS

vii. Which of the following service provider provides the least amount of built in security? **1**
(c) IAAS

viii. Which one is correct key security concept? **1**
(d) All of these

ix. _____ serves as a PaaS vendor within Google App Engine system. **1**
(a) Google

x. Which uses platform and software as a service? **1**
(a) AWS

Q.2 i. Enlist and explain the requirements that need to be considered for cloud services. **2**

ii. Differentiate Software as a service and Platform as a service. **3**
1 mark for each difference

iii. How to do ECG analysis using the cloud? Explain with a diagram.   3 marks   **5**
2 marks

OR iv. Define cloud deployment model with suitable diagram and working. **5**
Explanation   3 marks
Diagram   1 mark
Working   1 mark

Q.3 i. How dual boot is different from virtualization? Explain it. **2**

ii. Write short note on- **8**
(a) Cloud interoperability   4 marks
(b) Cloud broker   4 marks

OR iii. Describe different component of cloud architecture with neat diagram.   6 marks   **8**
2 marks

Q.4 i. Differentiate VDI and DAAS. **3**
1.5 marks for each difference

ii. How BAAS is useful for ease of recovery, affordability services in a cloud environment? **7**

OR iii. Lifecycle of SLA with suitable diagram and working. **7**
Explanation   5 marks
Diagram and working   2 marks

Q.5 i. Explain cloud computing security architecture with neat diagram. **4**
Explanation   3 marks
Diagram   1 mark

ii. List various security issues in cloud.   3 marks   **6**
Explain each of them with diagram   2 marks
example.   1 mark

OR iii. Define the following in brief: **6**
(a) Vulnerability assessment   3 marks
(b) IAM   3 marks

Q.6 Write short note on any two:
i. AWS   **5**
ii. Xen hypervisor   **5**
iii. Open stack   **5**

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P.T.O.