

Total No. of Questions: 6

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Enrollment No.....



Faculty of Engineering  
End Sem (Odd) Examination Dec-2017  
CA5EL29 Cloud Computing

Programme: MCA Branch/Specialisation: Computer 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 is an essential characteristic of the Cloud? **1**  
(a) Resource utilization (b) Resource pooling  
(c) Resource planning (d) Resource reservation
  - ii. Which is a key step in building a Cloud Infrastructure? **1**  
(a) Centralize services and resources  
(b) Automate resource classification  
(c) Automate service provisioning  
(d) Customize services and resources
  - iii. Which is the Cloud deployment model that will be a suitable choice for a group of organizations with shared concerns? **1**  
(a) Private Cloud (b) Hybrid Cloud  
(c) Public Cloud (d) Community Cloud
  - iv. Which tool helps to create Cloud services? **1**  
(a) Service management tool (b) Service creation tool  
(c) Service monitoring tool (d) Service planning tool
  - v. Which is the primary function of hypervisor? **1**  
(a) Allows multiple operating systems to run concurrently on a physical machine  
(b) Allows multiple operating systems to run concurrently on a virtual machine  
(c) Allows multiple file systems to run concurrently on a virtual machine  
(d) Allows authorization to virtual machine resources to users

P.T.O.

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- vi. Which technique allows traffic from multiple VLANs to traverse over a single network connection? **1**  
(a) NIC Teaming (b) Multipathing  
(c) Port group (d) Trunking
- vii. Which security mechanism provides an effective control for data confidentiality and integrity? **1**  
(a) Copy and move restrictions (b) Authorization  
(c) Trusted computing base (d) Encryption
- viii. What is the primary goal of a security audit? **1**  
(a) Evaluate effectiveness of security enforcement  
(b) Evaluate effectiveness of data confidentiality  
(c) Evaluate effectiveness of data integrity  
(d) Evaluate effectiveness of data availability
- ix. Which of the following web applications can be deployed with Azure? **1**  
(a) ASP.NET (b) PHP (c) WCF (d) All of these
- x. Which is an example of platform-as-a-service? **1**  
(a) EMC Atmos online (b) Salesforce.com  
(c) Google App Engine (d) EMC Mozy

- Q.2 Attempt any two:
- i. What do you mean by cloud computing? Explain characteristics of cloud computing? **5**
  - ii. Briefly summarize the cloud computing reference model? Enlist all the benefits of cloud computing? **5**
  - iii. Describe how cloud computing technology can be applied to support remote ECG monitoring? **5**

- Q.3 Attempt any two:
- i. Explain and enlist challenges in cloud computing? **5**
  - ii. How virtual desktop infrastructure provides end-user virtualization solutions? **5**
  - iii. Classify the different types of clouds? **5**

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- Q.4 Attempt any two:
- i. What do you mean by provisioning? Enlist all the benefits of provisioning? **5**
  - ii. Why high availability and disaster recovery is important factors for cloud deployments? Differentiate between RTO & RPO? **5**
  - iii. Explain VLAN and VSAN with its benefits? **5**
- Q.5 Attempt any two:
- i. Write fundamental characteristics of cloud security design principles? **5**
  - ii. Explain secure development practice w.r.t:- **5**  
Handling data, Code practices, Language options, Input validation and content injection, Physical security of the system.
  - iii. Why Identity management is a fundamental function required for secure cloud computing? How effective implementing identity management takes place? **5**
- Q.6 Attempt any two:
- i. What is a third-party cloud service? Give some examples of a third-party cloud service? **5**
  - ii. What is a Cloud Federation? What are the three different levels expressing the concept of Inter Cloud / Cloud Federation? **5**
  - iii. Explain Aneka with respect to: - **5**  
Fabric Services and Foundation Services.

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**CA5EL29 Cloud Computing  
Marking Scheme**

Q.1	i. Which is an essential characteristic of the Cloud? (b) Resource pooling	<b>1</b>	Q.3	Attempt any two: i. 1 mark for each challenge in cloud computing. (5 * 1 mark = 5 marks)	<b>5</b>
	ii. Which is a key step in building a Cloud Infrastructure? (c) Automate service provisioning	<b>1</b>		ii. 4 marks for explanation of VDI 1 mark for diagram.	<b>5</b>
	iii. Which is the Cloud deployment model that will be a suitable choice for a group of organizations with shared concerns? (d) Community Cloud	<b>1</b>		iii. 1.25 marks for each type of cloud. (4 * 1.25 marks = 5 marks)	<b>5</b>
	iv. Which tool helps to create Cloud services? (a) Service management tool	<b>1</b>	Q.4	Attempt any two:	
	v. Which is the primary function of hypervisor? (a) Allows multiple operating systems to run concurrently on a physical machine	<b>1</b>		i. 2 marks for provisioning 3 Marks for benefits of provisioning.	<b>5</b>
	vi. Which technique allows traffic from multiple VLANs to traverse over a single network connection? (d) Trunking	<b>1</b>		ii. 3 marks for high availability and disaster recovery 2 marks for RTO & RPO	<b>5</b>
	vii. Which security mechanism provides an effective control for data confidentiality and integrity? (d) Encryption	<b>1</b>		iii. 2.5 marks for VLAN with its benefits 2.5 marks VSAN with its benefits	<b>5</b>
	viii. What is the primary goal of a security audit? (a) Evaluate effectiveness of security enforcement	<b>1</b>	Q.5	Attempt any two:	
	ix. Which of the following web applications can be deployed with Azure? (a) All of these	<b>1</b>		i. 1 mark for each characteristics of cloud security design principles (1 mark * 5 = 5 marks)	<b>5</b>
	x. Which is an example of platform-as-a-service? (c) Google App Engine	<b>1</b>		ii. 1 mark for each part of secure development practice. (1 mark * 5 = 5 marks).	<b>5</b>
Q.2	Attempt any two:			iii. 2.5 marks for Identity management 2.5 marks for implementing identity management	<b>5</b>
	i. 1 mark for cloud computing definition 4 marks for cloud computing characteristics.	<b>5</b>	Q.6	Attempt any two:	
	ii. 3 marks for reference model 2 marks for cloud benefits.	<b>5</b>		i. 2.5 marks for third-party cloud service 2.5 marks for examples of a third-party cloud service	<b>5</b>
	iii. 4 marks for ECG monitoring 1 mark for diagram.	<b>5</b>		ii. 0.5 mark for Cloud Federation 4.5 marks for different levels Inter Cloud/Cloud Federation (1.5 marks * 3 = 4.5 marks)	<b>5</b>
				iii. Fabric Services and Foundation Services. 2.5 marks for each part of Aneka. (2.5 marks * 2 = 5 marks)	<b>5</b>
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