

**(60) MCQS WITH ANSWERS AND EXPLANATION**  
**UNIT II DATA STORAGE AND SECURITY IN CLOUD**

**Class: BE\_II**

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**SUB: Cloud Computing**

**Note : STUDY ALL 60 important MCQs + 1 Sentence answers of II<sup>nd</sup> UNIT**

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## **Cloud Computing Questions and Answers – Cloud Security**

This set of Cloud Computing Multiple Choice Questions & Answers (MCQs) focuses on “Cloud Security”.

1. Which of the following service provider provides the least amount of built in security?

- a) SaaS
- b) PaaS
- c) IaaS
- d) All of the mentioned

[View Answer](#)

**Answer: c**

**Explanation:** You get the least amount of built in security with an Infrastructure as a Service provider, and the most with a Software as a Service provider.

2. Point out the correct statement.

- a) Different types of cloud computing service models provide different levels of security services
- b) Adapting your on-premises systems to a cloud model requires that you determine what security mechanisms are required and mapping those to controls that exist in your chosen cloud service provider
- c) Data should be transferred and stored in an encrypted format for security purpose
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** When you identify missing security elements in the cloud, you can use mapping to work to close the gap.

3. Which of the following services that need to be negotiated in Service Level Agreements?

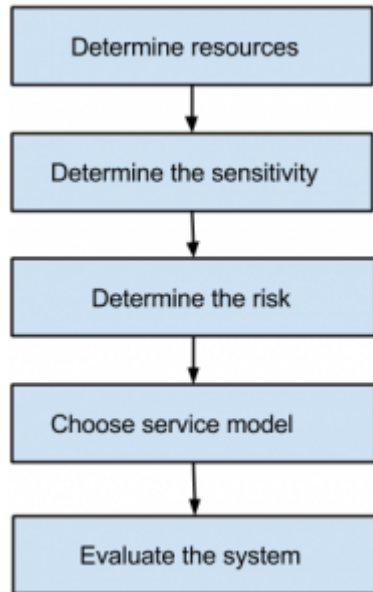
- a) Logging
- b) Auditing
- c) Regulatory compliance
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** Logging, auditing, and regulatory compliance are all features that require planning in cloud computing systems.

4. The following flowchart is intended to evaluate \_\_\_\_\_ in any cloud.



- a) risk
- b) errors
- c) inconsistencies
- d) none of the mentioned

[View Answer](#)

**Answer: a**

**Explanation:** Your risks in any cloud deployment are dependent upon the particular cloud service model chosen and the type of cloud on which you deploy your applications.

5. Point out the wrong statement.

- a) You can use proxy and brokerage services to separate clients from direct access to shared cloud storage

- b) Any distributed application has a much greater attack surface than an application that is closely held on a Local Area Network
- c) Cloud computing doesn't have vulnerabilities associated with Internet applications
- d) All of the mentioned

View Answer

**Answer: c**

**Explanation: Additional vulnerabilities arise from pooled, virtualized, and outsourced resources.**

6. Which of the following area of cloud computing is uniquely troublesome?

- a) Auditing
- b) Data integrity
- c) e-Discovery for legal compliance
- d) All of the mentioned

View Answer

**Answer: d**

**Explanation: Storing data in the cloud is of particular concern.**

7. Which of the following is the operational domain of CSA?

- a) Scalability
- b) Portability and interoperability
- c) Flexibility
- d) None of the mentioned

View Answer

**Answer: b**

**Explanation: CSA is an industry working group that studies security issues in cloud computing and offers recommendations to its members.**

8. Which of the following is considered an essential element in cloud computing by CSA?

- a) Multi-tenancy
- b) Identity and access management
- c) Virtualization
- d) All of the mentioned

View Answer

**Answer: a**

**Explanation: Multi-tenancy adds a number of additional security concerns to cloud computing that need to be accounted for.**

9. Which of the following is used for Web performance management and load testing?

- a) VMware Hyperic
- b) Webmetrics
- c) Univa UD
- d) Tapinsystems

[View Answer](#)

**Answer: b**

**Explanation:** CA Cloud Insight is a cloud metrics measurement service.

10. Which of the following is application and infrastructure management software for hybrid multi-clouds?

- a) VMware Hyperic
- b) Webmetrics
- c) Univa UD
- d) Tapinsystems

[View Answer](#)

**Answer: c**

**Explanation:** Tapinsystems is provisioning and management service.

## Cloud Computing Questions and Answers – Security Service Boundary

This set of Cloud Computing online test focuses on “Security Service Boundary”.

11. Which of the following service provider provides the highest level of service?

- a) SaaS
- b) PaaS
- c) IaaS
- d) All of the mentioned

[View Answer](#)

**Answer: a**

**Explanation:** As you move upward in the stack, each service model inherits the capabilities of the model beneath it, as well as all the inherent security concerns and risk factors.

12. Point out the correct statement.

- a) PaaS supplies the infrastructure

- b) IaaS adds application development frameworks, transactions, and control structures
- c) SaaS is an operating environment with applications, management, and the user interface
- d) All of the mentioned

View Answer

**Answer: c**

**Explanation: IaaS has the least levels of integrated functionality and the lowest levels of integrated security, and SaaS has the most.**

13. Which of the following functional cloud computing hardware/software stack is the Cloud Reference Model?

- a) CAS
- b) CSA
- c) SAC
- d) All of the mentioned

View Answer

**Answer: b**

**Explanation: Cloud Security Alliance (CSA) is a not-for-profit organization with a mission to “promote the use of best practices for providing security assurance within Cloud.**

14. For the \_\_\_\_\_ model, the security boundary may be defined for the vendor to include the software framework and middleware layer.

- a) SaaS
- b) PaaS
- c) IaaS
- d) All of the mentioned

View Answer

**Answer: b**

**Explanation: In the PaaS model, the customer would be responsible for the security of the application and UI at the top of the stack.**

15. Point out the wrong statement.

- a) Each different type of cloud service delivery model creates a security boundary
- b) Any security mechanism below the security boundary must be built into the system
- c) Any security mechanism above the security boundary must be maintained by the customer
- d) All of the mentioned

View Answer

**Answer: d**

**Explanation: As you move up the stack, it becomes more important to make sure that the type and level of security is part of your Service Level Agreement.**

16. Which of the following model allows vendor to provide security as part of the Service Level Agreement?

- a) SaaS
- b) PaaS
- c) IaaS
- d) All of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: Compliance, governance, and liability levels are stipulated under the contract for the entire stack.**

17. Which of the following cloud does not require mapping?

- a) Public
- b) Private
- c) Hybrid
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: Private cloud may be internal or external to an organization.**

18. Which of the following service model is owned in terms of infrastructure by both vendor and customer?

- a) Public
- b) Private
- c) Hybrid
- d) None of the mentioned

[View Answer](#)

**Answer: c**

**Explanation: Infrastructure location is both on- and off-premises.**

19. Which of the following model type is not trusted in terms of security?

- a) Public
- b) Private
- c) Hybrid
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: It is owned by a vendor.**

20. Which of the following has infrastructure security managed and owned by the vendor?

- a) Hybrid
- b) Private/Community
- c) Public
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation:** Cloud computing has a tendency to blur the location of the defined security perimeter in such a way that the previous notions of network firewalls and edge defenses often no longer apply.

## Cloud Computing Questions and Answers – Security Data

This set of Cloud Computing Multiple Choice Questions & Answers (MCQs) focuses on “Security Data”.

21. Which of the following is a compliance standard?

- a) PCI-DSS
- b) HIPPA
- c) GLBA
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** A compliance standard can be any government regulatory framework.

22. Point out the correct statement.

- a) The cloud service model you choose does not determine the variety of security features, compliance auditing, and other requirements
- b) To determine the particular security mechanisms you need, you must perform a mapping of the particular cloud service model to the particular application you are deploying
- c) A security control model includes the security that you normally use for your applications only
- d) All of the mentioned

[View Answer](#)

**Answer: b**

**Explanation:** These mechanisms must be supported by the various controls that are provided by your service provider, your organization, or a third party.

23. Which of the following is a key mechanism for protecting data?

- a) Access control
- b) Auditing
- c) Authentication
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation: Whatever service model you choose should have mechanisms operating in all above mentioned areas that meet your security requirements.**

24. How many security accounts per client is provided by Microsoft?

- a) 1
- b) 3
- c) 5
- d) 7

[View Answer](#)

**Answer: c**

**Explanation: On Amazon Web Service, you can create multiple keys and rotate those keys during different sessions.**

25. Point out the wrong statement.

- a) Securing data sent to, received from, and stored in the cloud is the single largest security concern
- b) The problem with the data you store in the cloud is that it can be located anywhere in the cloud service provider's system
- c) One and only approach to isolating storage in the cloud from direct client access is to create layered access to the data
- d) All of the mentioned

[View Answer](#)

**Answer: c**

**Explanation: The location of the proxy and the broker is not important.**

26. Which of the following are a common means for losing encrypted data?

- a) lose the keys
- b) lose the encryption standard
- c) lose the account
- d) all of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: Keys should have a defined life cycle.**



27. Which of the following is the standard for interoperable cloud-based key management?

- a) KMIP
- b) PMIK
- c) AIMK
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: KMIP stands for Key Management Interoperability Protocol.**

28. Which of the following was one of the weaker aspects of early cloud computing service offerings?

- a) Logging
- b) Integrity checking
- c) Consistency checking
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: Cloud service providers often have proprietary log formats.**

29. Which of the following is one of the most actively developing and important areas of cloud computing technology?

- a) Logging
- b) Auditing
- c) Regulatory compliance
- d) None of the mentioned

[View Answer](#)

**Answer: c**

**Explanation: For any company with clients in multiple countries, the burden of regulatory compliance is onerous.**

30. Amazon Web Services supports \_\_\_\_\_ Type II Audits.

- a) SAS70
- b) SAS20
- c) SAS702
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: Becoming a cloud service provider requires a large investment.**

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# Cloud Computing Questions and Answers – Identity Protocol Standards

This set of Cloud Computing Multiple Choice Questions & Answers (MCQs) focuses on “Identity Protocol Standards”.

31. Which of the following is done by Identity management?

- a) controlling access to data in the cloud
- b) maintaining user roles
- c) preventing unauthorized uses
- d) all of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** Identity management is a primary mechanism for controlling access to data in the cloud, preventing unauthorized uses, maintaining user roles, and complying with regulations.

32. Point out the correct statement.

- a) Identities are not tied to the concept of accounts and can be used for contacts or “ID cards”
- b) Identities are important from a reliability standpoint
- c) Presence is important in cloud computing because it adds context that can modify services and service delivery
- d) All of the mentioned

[View Answer](#)

**Answer: c**

**Explanation:** Identities can be used to authenticate client requests for services in a distributed network system.

33. Which of the following is required by Cloud Computing?

- a) That you establish an identity
- b) That the identity be authenticated
- c) That the authentication be portable
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** When applied to a number of users in a cloud computing system, these requirements describe systems that must provision identities.

34. Which of the following standard is the key to creating Single Sign-On (SSO) systems?

- a) OpenID 2.0
  - b) CHAP
  - c) SMAL
  - d) None of the mentioned
- [View Answer](#)

**Answer: a**

**Explanation:** Some cloud service providers have adopted OpenID as a service.

35. Point out the wrong statement.

- a) OpenID 2.0 is the standard associated with creating an identity
  - b) OpenID doesn't specify the means for authentication of identity
  - c) OpenID provides access to important Web sites
  - d) None of the mentioned
- [View Answer](#)

**Answer: d**

**Explanation:** Authentication can be by a Challenge and Response Protocol (CHAP).

36. Which of the following is a complementary mechanism to OpenID and is used to create SSO systems?

- a) OpenSSL
  - b) CHAP
  - c) SMAL
  - d) None of the mentioned
- [View Answer](#)

**Answer: c**

**Explanation:** Taken as a unit, OpenID and SAML are being positioned to be the standard authentication mechanism for clients accessing cloud services.

37. Which of the following entity queries the OpenID identity provider to authenticate the veracity of the OpenID credentials?

- a) serving party
  - b) relieving party
  - c) relaying party
  - d) none of the mentioned
- [View Answer](#)

**Answer: c**

**Explanation: The OpenID is presented to a service that provides access to the resource that is desired.**

38. Which of the following provides a token service that can be used to present validated access to resources?

- a) OAuth
- b) OCheck
- c) SAML
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: OAuth is similar to OpenID.**

39. Which of the following foundation offers .NET developers Visual Studio integration of WS-Federation and WS-Trust open standards?

- a) Windows Workflow
- b) Windows Identity
- c) Windows compliance
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: ASP.NET Web applications created with WIF integrate the Windows Communication Foundation SOAP service (WCF-SOAP) into a unified object model.**

40. \_\_\_\_\_ allows users to authenticate their access to applications both locally and in the cloud with a claims-based identity.

- a) AD FS
- b) AC
- c) SAS
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: AD FS uses WS-Federation, WS-Trust, and SAML, which allows users to access a system based on IBM, Novel, SAP, and many other vendors.**

# Cloud Computing Questions and Answers – Service Oriented Architecture

This set of Cloud Computing Multiple Choice Questions & Answers (MCQs) focuses on “Service Oriented Architecture”.

41. Which of the following describes a message-passing taxonomy for a component-based architecture that provides services to clients upon demand?

- a) SOA
- b) EBS
- c) GEC
- d) All of the mentioned

[View Answer](#)

**Answer: a**

**Explanation:** Clients access a component that complies with SOA by passing a message containing metadata to be acted upon in a standard format.

42. Point out the correct statement.

- a) Service Oriented Architecture (SOA) describes a standard method for requesting services from distributed components and managing the results
- b) SOA provides the translation and management layer in an architecture that removes the barrier for a client obtaining desired services
- c) With SOA, clients and components can be written in different languages and can use multiple messaging protocols
- d) All of the mentioned

[View Answer](#)

**Answer: d**

**Explanation:** You don't need SOA if you are creating a monolithic cloud application that performs a specific function such as backup, e-mail, Web page access, or instant messaging.

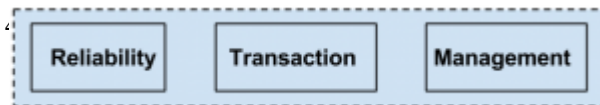
43. Which of the following is a repeatable task within a business process?

- a) service
- b) bus
- c) methods
- d) all of the mentioned

[View Answer](#)

**Answer: a**

**Explanation:** A business task is a composition of services.



shown in the following figure?

- a) Description
  - b) Messaging
  - c) Business Process
  - d) QoS
- [View Answer](#)

**Answer: d**

**Explanation: QoS is established, and the service is instantiated.**

45. Point out the wrong statement.

- a) SOA provides the standards that transport the messages and makes the infrastructure to support it possible
- b) SOA provides access to reusable Web services over an SMTP network
- c) SOA offers access to ready-made, modular, highly optimized, and widely shareable components that can minimize developer and infrastructure costs
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: Service Oriented Architecture has been part of a collaborative effort on the part of both large and small vendors to come up with a common solution to architecting complex business software processes efficiently.**

46. Which of the following is used to define the service component that performs the service?

- a) WSDL
- b) SCDL
- c) XML
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: SCDL stands for Service Component Definition Language.**

47. Which of the following is commonly used to describe the service interface, how to bind information, and the nature of the component's service or endpoint?

- a) WSDL
- b) SCDL
- c) XML

d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation:** The most commonly used message-passing format is an Extensible Markup Language (XML) document using the Simple Object Access Protocol (SOAP).

48. Which of the following provides commands for defining logic using conditional statements?

a) XML

b) WS-BPEL

c) JSON

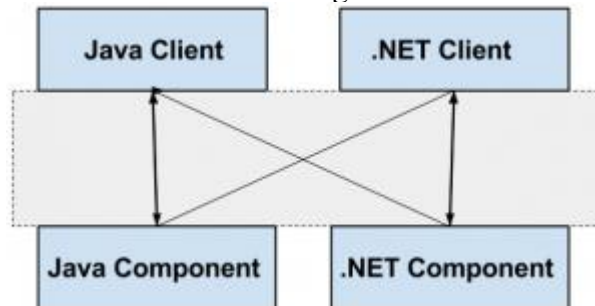
d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation:** Business process is a collection of activity graphs.

49. Which of the following is used as middleware layer in the following figure?



a) XML

b) ESB

c) UDDI

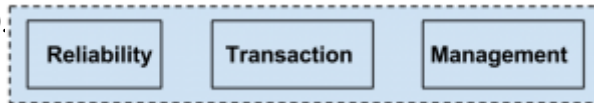
d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation:** An ESB may be part of a network operating system or may be implemented using a set of middleware products.

50. Which of the following is not a part of the Description Module in SOA stack?



- a) Business Process Execution Language for Web Services
- b) XML  
SOAP
- c) Other Protocols

d) None of the mentioned

[View Answer](#)

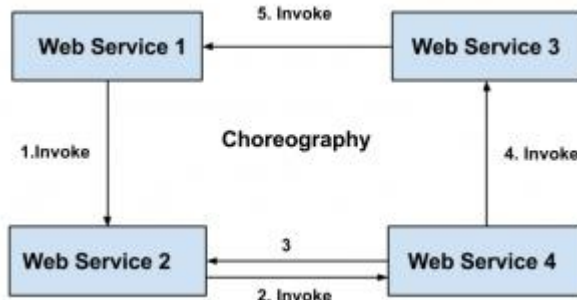
**Answer: d**

**Explanation:** WSDL is a language for describing web services and how to access them

## Cloud Computing Questions and Answers – Event-Driven SOA or SOA 2.0

This set of Cloud Computing online quiz focuses on “Event-Driven SOA or SOA 2.0”.

51. What should be the message given by Web Service 3 to Web Service 2 in the following figure for execution in cooperative way?



- a) Reply
- b) Invoke
- c) Reject
- d) None of the mentioned
- [View Answer](#)

**Answer: a**

**Explanation:** With choreography, business process execution is a cooperative affair.



52. Point out the correct statement.

- a) Some mature SOA implementations favor orchestration over choreography
- b) Most mature SOA implementations favor choreography over orchestration
- c) With orchestration, multiple service manages the various processes
- d) None of the mentioned

[View Answer](#)

**Answer: d**

**Explanation: Most mature SOA implementations favor orchestration over choreography.**

53. Which of the following element is used by orchestrated business process commonly referred to as?

- a) conductor
- b) coordinator
- c) orchestrator
- d) all of the mentioned

[View Answer](#)

**Answer: c**

**Explanation: orchestrator is the central controlling service element.**

54. SOA \_\_\_\_\_ an extension of the Service Oriented Architecture to respond to events that occur as a result of business processes.

- a) 2.0
- b) 3.0
- c) 4.0
- d) All of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: SOA 2.0 can allow low-level events to trigger a business process, correlate events with the information contained in the SOA design.**

55. Point out the wrong statement.

- a) Event handling is part of event-driven SOA or SOA 2.0
- b) An ESB provides a lower layer for event management with a messaging infrastructure
- c) UML is the modeling language of the Object Management Group that provides a method for creating visual models for software
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: An ESB isn't required by SOA, but it is often used to create a compliant and efficient service architecture.**

56. Which of the following application has the ability to query event data in the same way that a stock ticker or trading application can query trading data?

- a) CVE
- b) CEV
- c) XML
- d) None of the mentioned

[View Answer](#)

**Answer: a**

**Explanation: The CVE application provides the same kind of heartbeat and correlation functionality that a stock trading application does.**

57. What does CVE in SOA design stand for?

- a) Causal Vector Engine
- b) Continuous Vector Engine
- c) Causal Valuable Engine
- d) None of the mentioned

[View Answer](#)

Answer: a

Explanation: Many CVE systems display events in a console in different contexts so that an observer can analyze the display and take appropriate actions.

58. Which of the following is a collaborative effort where the logic of the business process is pushed out to the members?

- a) Orchestration
- b) Choreography
- c) SOA 2.0
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: In choreography, each Web service that is part of a business process is aware of when to process a message and with what client or component it needs to interact with.**

59. In the \_\_\_\_\_ model, data and messages are exchanged in a Service Data Object (SDO).

- a) CSA
- b) SCA
- c) UDDI
- d) None of the mentioned

[View Answer](#)

**Answer: b**

**Explanation: Components are coded with their service logic and their dependencies, QoS is established, and the service is instantiated.**

60. How many types of methods are used to combine web services?

- a) 1
- b) 2
- c) 3
- d) None of the mentioned

View Answer

**Answer: b**

**Explanation: Two main methods are used to combine Web services: orchestration and choreography.**