Course Exam Quiz

Question 1

What are containers useful for?

- creating similar environments

- quickly provisioning dependencies locally

- keeping computer clean

Question 2

Which of the following is the availability formula used in cloud environments?

- availability = uptime / (downtime + uptime)

Question 3

Which are two effective measures to improve infrastructure security?

- MFA for the development team

- Reduce the attack surface as much as possible

Question 4

Packet mirroring in cloud network can be useful for:

- security analysis

- bug testing

- anomaly detection

Question 5

Monitoring of the virtual host is useful to ensure:

- knowing when to scale (up/down, in/out)

- if provider respects contracts (SLA)

Question 6

A resilient system is one that is:

- adaptive

- self-healing

- predictable

Question 7

In a cloud environment the role of a load balancer is to:

- balance traffic across multiple targets

- monitor the health of target resources

- serve as a single point of entry

- A/B testing

Question 8

Which of the following characteristics is improved by designing and building applications in cloud environments?

- Scalability

- Security

- Availability

Question 9

Which of the following components are not managed by the cloud provider in an Infrastructure as a Service model?

- Application

- Data

- Operating System

Question 10

Virtual CPUs might be:

- timeshares of real CPU core

- physical core

- logical core

Question 11

Some of the load balancer's features are:

- routing based on path

- health checks

- port mapping

- caching

Question 12

In a cloud environment, vertical scalability means that:

- it doesn't require additional components

- it might be the only approach for certain components (RDBMS)

Question 13

The role of the hypervisor is to:

- create and manage guest machines

- translate and limit instructions

Question 14

Which of the following are HTTP idempotent methods?

- GET

- HEAD

- DELETE

- PUT

Question 15

Infrastructure as a Service is best used for:

- first migration stages (lift and shift)

- when ultra-high performance is a must

Question 16

Which three options of the following are valid OAuth 2.0 flows?

- Authorization Code

- Resource Owner Password Credentials

- Authorization Code with PKCE

Question 17

Which are some common triggers for serverless functions?

- Queue messages

- HTTP

- File uploads to serverless storage

Question 18

FaaS stands for:

- Functions as a Service

Question 19

Infrastructure security is concerned with:

- cloud user

Question 20

When can a service be considered serverless?

- When the service can scale down to 0

- When you don't have to provision capacity

- When you pay only for what you use

- When you don't have to set up any infrastructure

Question 21

In which case is a streaming service more suitable than a queue?

- When we might want to replay previous messages/events

Question 22

What are Docker volumes good for?

- needed since containers are ephemeral and isolated

- a way to persist data separate from the container's lifecycle

Question 23

Why are serverless databases usually NoSQL?

- Because NoSQL databases usually scale better

- Because NoSQL databases are simpler (e.g., no ACID)

Question 24

Which are some common concerns when working with queues?

- Messages might be out of order

- The same message might be delivered multiple times

Question 25

Which is the optimal approach for the least privilege principle when admin rights are required?

- Leverage features that enable just-in-time privileges

Question 26

The CAP theorem referres to:

- Consistency,

- Availability

- Partition Tolerance

Question 27

Which two options of the following could be considered identity providers (IdP)?

- Social platforms such as Facebook and Google

- Custom built OpenID Connect systems

Question 28

Which are some of the concerns when adopting a serverless architecture?

- Your system might not have enough control

- Your system might overload other dependencies

Question 29

OAuth 2.0 is a(n):

- Authorization protocol

Question 30

Among the techniques for achieving high availability are:

- Multi region

- Multi availability zones

- Floating/elastic IP

Question 31

What makes a system highly available?

- Hardware

- Software

- Data

- Network

Question 32

Which of the following are protocols used by the internet?

- IP

- BGP

- RIP

- OSPF

Question 33

Which of the following represent possible types of consistency in cloud database models?

- Strong consistency

- Eventual consistency

- Tunable consistency

Question 34

Related to users' access and permissions for infrastructure security, confidentiality enforces:

- Encryption

Question 35

What are CDNs good for?

- Improve load times

- Optimize costs

- Improve security

Question 36

Which of the following represent types of load balancers?

- HTTP

- TCP/UDP

- DNS

Question 37

Which of the following represent HTTP safe methods?

- GET

- HEAD

Question 38

Cloud network security can be enforced by:

- Firewalls

- Network access control lists

Question 39

In a cloud environment, the role of a load balancer is to:

- Balance traffic across multiple targets

- Monitor the health of target resources

- Serve as a single point of entry

- A/B testing

Question 40

The relationship between TLS and SSL is:

- TLS is the successor of SSL

Question 41

Asymmetric encryption is suited for:

- Small payloads

- Digital signatures (identity verification)

Question 42

From the Kubernetes terminology, we can say that a pod:

- Is the smallest deployment unit

- Runs one or more containers

Question 43

Which is the correct order for disaster recovery strategies from cheapest to the most expensive?

- Backup and restore, pilot light, warm standby, hot site

Question 44

Which are the 2 main API styles?

- Procedure Oriented

- Entity Oriented

Question 45

Related to users access and permissions for infrastructure security, confidentiality enforces:

- Encryption

Question 46

What of the following components are not managed by the cloud provider in an Infrastructure as a Service model?

- Operating System

- Application

- Data

Question 47

Which are the two effective measures to improve infrastructure security?

- MFA for the development team

- Reduce the attack surface as much as possible

Question 48

How are the messages retrieved from queues in comparison to pub/sub systems?

- The client has to pull the messages from queues while pub/sub pushes the messages to the client

Question 49

When choosing cloud services, the price plan can be:

- Fixed

- Tiered

- Dynamic

Question 50

Why would you consider GraphQL instead of REST?

- Because it has built-in introspection

- Because we can specify which fields to fetch leading to lower data usage

Question 51

Which are the main cloud deployment models?

- Private

- Public

- Community

- Hybrid

Question 52

Which of the following is not an application security process/technique?

- Runtime checking

Question 53

Why would be concerned with the API design in the context of the cloud?

- Because SaaS products, which are growing in popularity, usually offer APIs

- Because the microservices architecture is adopted more frequently

Question 54

Which is the correct order complexity-wise in decreasing order for NoSQL database models?

- Graph, Columnar, Document, Key-Value

Question 55

In a cloud environment, horizontal scaling means that:

- It can scale infinitely

- It requires load balancers

Question 56

Which of the following is not an Integration Service for cloud?

- Shared memory

Question 57

What characterizes resource-oriented APIs?

- Fits better for public APIs

- The behavior of the system is primarily driven by the data

- Usually leads to a concise set of operations

Question 58

Why is loose coupling beneficial?

- Facilitates better maintainability and extensibility

Question 59

The 12 Factor App is a(n):

- Methodology for building scalable and maintainable software

Question 60

Which are some concerns when adopting a serverless architecture?

- You might not have enough control

- Your system might overload other dependencies

Question 61

Which of the following represent possible type of consistency in cloud database models?

- Strong consistency

- Eventual consistency

- Tunable consistency

Question 62

Which is true for a graph database model?

- Contains nodes and relationships

- Nodes contain properties (key-value pairs)

Question 63

Which of the following approaches has the ideal coupling?

- Separated services communicating through a message queue

Question 65

What is the shared responsibility model?

- A model describing the responsibility of the cloud provider and the customer with regards to security

Question 66

Some of the load balancer features are:

- Caching

- Routing based on path

- Health checks

- Port mapping

Question 67

A key-value database offers:

- High and consistent throughput

- Ultra-low and consistent latency