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Started on	Wednesday, 13 January 2021, 6:00 PM
State	Finished
Completed on	Wednesday, 13 January 2021, 6:20 PM
Time taken	19 mins 39 secs
Marks	8.80/10.00
Grade	8.80 out of 10.00 (88%)

Question **1**

Correct

Mark 0.40 out of 0.40

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

- ☒ encryption
- ☐ usage of password vaults
- ☐ two factor authentication
- ☐ saving data only in private clouds



Your answer is correct.

The correct answer is:

encryption

Question **2**

Correct

Mark 0.40 out of 0.40

Which are the main cloud deployment models?

Select one or more:

☒ Private



☒ Public



☒ Community



☒ Hybrid



Your answer is correct.

The correct answers are:

Public,

Private,

Community,

Hybrid

Question **3**

Correct

Mark 0.40 out of 0.40

What are containers useful for?

☒ creating similar environments



☒ quickly provisioning dependencies locally



☒ keeping computer clean



☐ keeping dependencies isolated from the application

Your answer is correct.

The correct answers are:

creating similar environments,

quickly provisioning dependencies locally,

keeping computer clean

Question **4**

Correct

Mark 0.40 out of 0.40

Which of the following represent types of load balancers?

- ☒ TCP/UDP
- ☒ HTTP
- ☒ DNS
- ☐ NAT



Your answer is correct.

The correct answers are:

HTTP,

TCP/UDP,

DNS

Question **5**

Correct

Mark 0.40 out of 0.40

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

- ☐ input validation
- ☐ encryption
- ☒ runtime checking
- ☐ authentication
- ☐ authorization



Your answer is correct.

The correct answer is:

runtime checking

Question 6

Correct

Mark 0.40 out of 0.40

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 cloud systems work best with REST APIs
- ☒ Because the microservices architecture is adopted more frequently



Your answer is correct.

The correct answers are:

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

Because the microservices architecture is adopted more frequently

Question 7

Correct

Mark 0.40 out of 0.40

Monitoring of the virtual host is useful to ensure:

- ☐ knowing your current price to pay
- ☐ knowing the size of the database
- ☒ if provider respects contracts (SLA)
- ☒ knowing when to scale (up/down, in/out)



Your answer is correct.

The correct answers are:

if provider respects contracts (SLA),

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

Question 8

Correct

Mark 0.40 out of 0.40

Packet mirroring in cloud network can be useful for:

- ☐ boosting traffic performance
- ☒ security analysis
- ☒ anomaly detection
- ☒ bug testing



Your answer is correct.

The correct answers are:

security analysis,

bug testing,

anomaly detection

Question 9

Correct

Mark 0.40 out of 0.40

OpenID Connect is a(n):

- ☐ SSO protocol
- ☐ Authorization protocol built on top of OAuth 2.0
- ☐ Inter-service communication protocol
- ☒ Authentication protocol built on top of OAuth 2.0



Your answer is correct.

The correct answer is:

Authentication protocol built on top of OAuth 2.0

Question **10**

Partially correct

Mark 0.27 out of 0.40

Among the techniques for achieving high availability are:

- ☐ real time operating system
- ☐ floating/elastic IP
- ☒ multi availability zones
- ☒ multi region



Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

multi region,

multi availability zones,

floating/elastic IP

Question **11**

Correct

Mark 0.40 out of 0.40

Which are two effective measures to improve infrastructure security?

- ☒ Reduce the attack surface as much as possible
- ☐ Implement OAuth 2.0
- ☒ MFA for the development team
- ☐ MFA for the users



Your answer is correct.

The correct answers are:

MFA for the development team,

Reduce the attack surface as much as possible

Question **12**

Correct

Mark 0.40 out of 0.40

Which of the following represent HTTP safe methods?

- ☒ HEAD
- ☒ GET
- ☐ PATCH
- ☐ POST



Your answer is correct.

The correct answers are:

GET,

HEAD

Question **13**

Partially correct

Mark 0.20 out of 0.40

Why would you consider GraphQL instead of REST?

- ☐ Because it scales better
- ☒ Because it has built in introspection
- ☐ Because we can specify which fields to fetch leading to lower data usage
- ☐ Because it is easier to cache



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

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

Because it has built in introspection

Question **14**

Correct

Mark 0.40 out of 0.40

OAuth 2.0 is a(n):

- ☐ User management service
- ☐ Multi-factor authentication service
- ☐ Authentication protocol
- ☒ Authorization protocol



Your answer is correct.

The correct answer is:

Authorization protocol

Question **15**

Partially correct

Mark 0.20 out of 0.40

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

- ☐ SaaS services
- ☒ Social platforms such as Facebook and Google
- ☐ Resource Servers
- ☐ Custom built OpenID Connect systems



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Social platforms such as Facebook and Google,

Custom built OpenID Connect systems

Question **16**

Correct

Mark 0.40 out of 0.40

The relationship between TLS and SSL is:

- ☐ TLS is built on top of SSL
- ☐ TLS handles communication while SSL handles identity verification
- ☐ They are not related
- ☒ TLS is the successor of SSL



Your answer is correct.

The correct answer is:

TLS is the successor of SSL

Question **17**

Correct

Mark 0.40 out of 0.40

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

- ☐ $\text{availability} = \text{uptime} / \text{downtime} + \text{uptime}$
- ☐ $\text{availability} = \text{uptime} / \text{uptime} + \text{downtime}$
- ☒ $\text{availability} = \text{uptime} / (\text{downtime} + \text{uptime})$
- ☐ $\text{availability} = \text{uptime} / \text{downtime}$



Your answer is correct.

The correct answer is:

$\text{availability} = \text{uptime} / (\text{downtime} + \text{uptime})$

Question **18**

Partially correct

Mark 0.13 out of 0.40

Virtual CPUs might be:

- ☒ logical core
- ☐ first thread of each core
- ☐ timeshares of real CPU core
- ☐ physical core



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

timeshares of real CPU core,

physical core,

logical core

Question **19**

Correct

Mark 0.40 out of 0.40

When can a service be considered serverless?

- ☒ When the service can scale down to 0
- ☒ When you pay only for what you use
- ☒ When you don't have to setup any infrastructure
- ☒ When you don't have to provision capacity



Your answer is correct.

The correct answers are:

When you don't have to setup any infrastructure,

When you don't have to provision capacity,

When you pay only for what you use,

When the service can scale down to 0

Question **20**

Correct

Mark 0.40 out of 0.40

A resilient system is one that is:

- ☒ predictable
- ☐ self contained
- ☐ self managed
- ☒ self healing
- ☒ adaptive



Your answer is correct.

The correct answers are:

adaptive,
self healing,
predictable

Question **21**

Partially correct

Mark 0.20 out of 0.40

Asymmetric encryption is suited for:

- ☒ Small payloads
- ☐ Digital signatures (identity verification)
- ☐ High-performance compute
- ☐ Large payloads



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Small payloads,
Digital signatures (identity verification)

Question **22**

Correct

Mark 0.40 out of 0.40

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

- ☐ When we want to reduce the load on the clients
- ☒ When we might want to replay previous messages/events
- ☐ When we don't want to store messages
- ☐ When it's enough if the message is processed by at least one client



Your answer is correct.

The correct answer is:

When we might want to replay previous messages/events

Question **23**

Correct

Mark 0.40 out of 0.40

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

- ☐ Create a dedicated admin user used only when needed
- ☐ Enable MFA
- ☐ Relax the security policies when needed
- ☒ Leverage features that enable just-in-time privileges



Your answer is correct.

The correct answer is:

Leverage features that enable just-in-time privileges

Question **24**

Partially correct

Mark 0.20 out of 0.40

Why are serverless databases usually NoSQL?

- ☐ Due to licensing limitations of SQL databases
- ☒ Because NoSQL databases usually scale better
- ☐ Because NoSQL databases are simpler (e.g. no ACID)
- ☐ Because data is non-relational in most cases anyway



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question **25**

Correct

Mark 0.40 out of 0.40

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

- ☐ document, columnar, key-value, graph
- ☐ graph, document, columnar, key-value
- ☒ graph, columnar, document, key-value
- ☐ key-value, document, columnar, graph



Your answer is correct.

The correct answer is:

graph, columnar, document, key-value

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Started on Wednesday, 13 January 2021, 6:00 PM

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Completed on Wednesday, 13 January 2021, 6:19 PM

Time taken 19 mins 14 secs

Marks 6.67/10.00

Grade **6.67** out of 10.00 (**67%**)

Question **1**

Correct

Mark 0.40 out of 0.40

The role of the hypervisor is to:

- ☒ translate and limit instructions
- ☐ manage users
- ☒ create and manage guest machines
- ☐ encrypt disk



Your answer is correct.

The correct answers are:

create and manage guest machines,

translate and limit instructions

Question **2**

Incorrect

Mark 0.00 out of 0.40

In a cloud environment horizontal scaling means that:

- ☒ it can scale infinitely
- ☐ it is compatible with any application architecture
- ☐ it requires load balancers
- ☒ it modifies existing VMs



Your answer is incorrect.

The correct answers are:

it can scale infinitely,

it requires load balancers

Question **3**

Partially correct

Mark 0.20 out of 0.40

Which are two effective measures to improve infrastructure security?

- ☒ MFA for the users
- ☐ Reduce the attack surface as much as possible
- ☒ MFA for the development team
- ☒ Implement OAuth 2.0



Your answer is partially correct.

You have selected too many options.

The correct answers are:

MFA for the development team,

Reduce the attack surface as much as possible

Question **4**

Correct

Mark 0.40 out of 0.40

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

- ☐ API Gateways
- ☐ publish/subscribe services
- ☒ shared memory
- ☐ workflow services
- ☐ queues



Your answer is correct.

The correct answer is:
shared memory

Question **5**

Correct

Mark 0.40 out of 0.40

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

- ☐ Because cloud systems work best with REST APIs
- ☒ Because the microservices architecture is adopted more frequently
- ☒ Because SaaS products, which are growing in popularity, usually offer APIs



Your answer is correct.

The correct answers are:

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

Because the microservices architecture is adopted more frequently

Question **6**

Correct

Mark 0.40 out of 0.40

When choosing cloud services, the price plan can be:

☒ Tiered☐ Transaction-based☒ Fixed☒ Dynamic

Your answer is correct.

The correct answers are:

Fixed,

Tiered,

Dynamic

Question **7**

Partially correct

Mark 0.27 out of 0.40

What characterizes resource-oriented APIs?

Select one or more:

☒ Fits better for public APIs☐ The behavior of the system is primarily driven by the data☒ Usually leads to a concise set of operations☐ Usually leads to strong coupling

Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

Usually leads to a concise set of operations,

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

Fits better for public APIs

Question 8

Correct

Mark 0.40 out of 0.40

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

- ☒ availability= $\text{uptime}/(\text{downtime}+\text{uptime})$
- ☐ availability= $\text{uptime}/\text{downtime}+\text{uptime}$
- ☐ availability= $\text{uptime}/\text{downtime}$
- ☐ availability= $\text{uptime}/\text{uptime}+\text{downtime}$



Your answer is correct.

The correct answer is:

availability= $\text{uptime}/(\text{downtime}+\text{uptime})$

Question 9

Partially correct

Mark 0.13 out of 0.40

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

- ☒ Application
- ☐ Operating System
- ☒ Storage
- ☒ Data
- ☐ Networking



Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

Application,

Data,

Operating System

Question **10**

Correct

Mark 0.40 out of 0.40

A resilient system is one that is:

- ☒ self healing
- ☐ self managed
- ☒ adaptive
- ☐ self contained
- ☒ predictable



Your answer is correct.

The correct answers are:

adaptive,
self healing,
predictable

Question **11**

Incorrect

Mark 0.00 out of 0.40

What is the shared responsibility model?

- ☐ A framework for finding out the optimal security approach
- ☒ A model describing the responsibility within a development team
- ☐ A model describing the responsibility of the cloud provider and the customer with regards to security
- ☐ A requirement for the ISO 27001 standard



Your answer is incorrect.

The correct answer is:

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

Question **12**

Partially correct

Mark 0.20 out of 0.40

Which of the following are HTTP idempotent methods?

☒ POST☒ DELETE☐ HEAD☒ PUT☒ GET

Your answer is partially correct.

You have correctly selected 3.

The correct answers are:

GET,

HEAD,

DELETE,

PUT

Question **13**

Correct

Mark 0.40 out of 0.40

Why is loose coupling beneficial?

☒ Facilitates better maintainability and extensibility☐ Usually makes the system more scalable☐ Improves network performance☐ We should prefer strong coupling instead

Your answer is correct.

The correct answer is:

Facilitates better maintainability and extensibility

Question **14**

Incorrect

Mark 0.00 out of 0.40

The 12 Factor App is a(n)

- ☐ Methodology for building scalable and maintainable software
- ☐ Authentication application
- ☒ Framework for building microservices



Your answer is incorrect.

The correct answer is:

Methodology for building scalable and maintainable software

Question **15**

Correct

Mark 0.40 out of 0.40

Which of the following are protocols used by the internet?

- ☒ OSPF
- ☒ BGP
- ☒ IP
- ☒ RIP



Your answer is correct.

The correct answers are:

IP,

BGP,

RIP,

OSPF

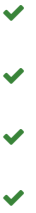
Question **16**

Correct

Mark 0.40 out of 0.40

When can a service be considered serverless?

- ☒ When you don't have to provision capacity
- ☒ When you don't have to setup any infrastructure
- ☒ When the service can scale down to 0
- ☒ When you pay only for what you use



Your answer is correct.

The correct answers are:

When you don't have to setup any infrastructure,

When you don't have to provision capacity,

When you pay only for what you use,

When the service can scale down to 0

Question **17**

Correct

Mark 0.40 out of 0.40

What are CDNs good for?

- ☒ optimize costs
- ☒ improve security
- ☐ reduce resources
- ☒ improve load times



Your answer is correct.

The correct answers are:

improve load times,

optimize costs,

improve security

Question 18

Partially correct

Mark 0.27 out of 0.40

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

- ☒ Scalability ✓
- ☒ Security ✓
 - Security
 - Cost Efficiency
 - Availability
 - Productivity
- ☒ Control ✗
- ☒ Availability ✓

Your answer is partially correct.

You have selected too many options.

The correct answers are: Scalability,

Security

Security

Cost Efficiency

Availability

Productivity,

Availability

Question 19

Correct

Mark 0.40 out of 0.40

Why would you consider GraphQL instead of REST?

- ☒ Because it has built in introspection ✓
- ☐ Because it is easier to cache
- ☐ Because it scales better
- ☒ Because we can specify which fields to fetch leading to lower data usage ✓

Your answer is correct.

The correct answers are:

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

Because it has built in introspection

Question **20**

Correct

Mark 0.40 out of 0.40

Infrastructure security is concerned with:

- ☐ application user
- ☒ cloud user
- ☐ operating system user
- ☐ database user



Your answer is correct.

The correct answer is:
cloud user

Question **21**

Incorrect

Mark 0.00 out of 0.40

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

- ☒ graph, document, columnar, key-value
- ☐ key-value, document, columnar, graph
- ☐ graph, columnar, document, key-value
- ☐ document, columnar, key-value, graph



Your answer is incorrect.

The correct answer is:
graph, columnar, document, key-value

Question **22**

Incorrect

Mark 0.00 out of 0.40

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

- ☒ can span multiple nodes
- ☐ is managed by the operating system
- ☐ runs one or more containers
- ☐ is the smallest deployment unit

✗

Your answer is incorrect.

The correct answers are:

is the smallest deployment unit,

runs one or more containers

Question **23**

Incorrect

Mark 0.00 out of 0.40

Which are some common concerns when working with queues?

- ☒ The message is lost if there are no consumers
- ☐ Messages might be out of order
- ☐ The same message might be delivered multiple times
- ☒ The consumers might get overloaded

✗

✗

Your answer is incorrect.

The correct answers are:

Messages might be out of order,

The same message might be delivered multiple times

Question **24**

Correct

Mark 0.40 out of 0.40

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

- ☒ Leverage features that enable just-in-time privileges
- ☐ Relax the security policies when needed
- ☐ Enable MFA
- ☐ Create a dedicated admin user used only when needed



Your answer is correct.

The correct answer is:

Leverage features that enable just-in-time privileges

Question **25**

Correct

Mark 0.40 out of 0.40

Why are serverless databases usually NoSQL?

- ☒ Because NoSQL databases usually scale better
- ☒ Because NoSQL databases are simpler (e.g. no ACID)
- ☐ Due to licensing limitations of SQL databases
- ☐ Because data is non-relational in most cases anyway



Your answer is correct.

The correct answers are:

Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

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Marks	8.27/10.00
Grade	8.27 out of 10.00 (83%)

Question **1**

Correct

Mark 0.40 out of 0.40

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

- ☐ availability=uptime/downtime
- ☒ availability=uptime/(downtime+uptime) ✓
- ☐ availability=uptime/uptime+downtime
- ☐ availability=uptime/downtime+uptime

Your answer is correct.

The correct answer is:
availability=uptime/(downtime+uptime)

Question **2**

Correct

Mark 0.40 out of 0.40

Which of the following are protocols used by the internet?

- ☒ IP ✓
- ☒ OSPF ✓
- ☒ BGP ✓
- ☒ RIP ✓

Your answer is correct.

The correct answers are:
IP,
BGP,
RIP,
OSPF

Question **3**

Correct

Mark 0.40 out of 0.40

When choosing cloud services, the price plan can be:

☒ Tiered☒ Fixed☒ Dynamic☐ Transaction-based

Your answer is correct.

The correct answers are:

Fixed,

Tiered,

Dynamic

Question **4**

Correct

Mark 0.40 out of 0.40

Cloud network security can be enforced by:

☐ domain name servers☒ firewalls☒ network access control lists☐ gateways

Your answer is correct.

The correct answers are:

firewalls,

network access control lists

Question **5**

Correct

Mark 0.40 out of 0.40

Which are the main cloud deployment models?

Select one or more:

☒ Private



☒ Public



☒ Hybrid



☒ Community



Your answer is correct.

The correct answers are:

Public,

Private,

Community,

Hybrid

Question **6**

Incorrect

Mark 0.00 out of 0.40

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

☒ Your system might not be able to handle big workloads



☒ You might not have enough control



☐ It will likely be more expensive than IaaS

☐ Your system might overload other dependencies

Your answer is incorrect.

The correct answers are:

You might not have enough control,

Your system might overload other dependencies

Question 7

Correct

Mark 0.40 out of 0.40

In a cloud environment horizontal scaling means that:

- ☒ it requires load balancers
- ☐ it is compatible with any application architecture
- ☐ it modifies existing VMs
- ☒ it can scale infinitely



Your answer is correct.

The correct answers are:

it can scale infinitely,

it requires load balancers

Question 8

Partially correct

Mark 0.27 out of 0.40

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

- ☐ tunable consistency
- ☐ no consistency
- ☒ strong consistency
- ☒ eventual consistency



Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

strong consistency,

eventual consistency,

tunable consistency

Question **9**

Correct

Mark 0.40 out of 0.40

Which are the 2 main API styles?

- ☐ Graph
- ☒ Procedure Oriented
- ☐ REST
- ☒ Entity Oriented



Your answer is correct.

The correct answers are:

Procedure Oriented,

Entity Oriented

Question **10**

Correct

Mark 0.40 out of 0.40

Which of the following represent HTTP safe methods?

- ☐ POST
- ☒ HEAD
- ☐ PATCH
- ☒ GET



Your answer is correct.

The correct answers are:

GET,

HEAD

Question 11

Correct

Mark 0.40 out of 0.40

Which are two effective measures to improve infrastructure security?

- ☒ MFA for the users ✗
- ☒ MFA for the development team ✓
- ☒ Implement OAuth 2.0 ✗
- ☒ Reduce the attack surface as much as possible ✓

Your answer is correct.

The correct answers are:

MFA for the development team,

Reduce the attack surface as much as possible

Question 12

Incorrect

Mark 0.00 out of 0.40

Monitoring of the virtual host is useful to ensure:

- ☐ if provider respects contracts (SLA) ✗
- ☒ knowing your current price to pay ✗
- ☒ knowing the size of the database ✗
- ☒ knowing when to scale (up/down, in/out) ✓

Your answer is incorrect.

The correct answers are:

if provider respects contracts (SLA),

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

Question 13

Correct

Mark 0.40 out of 0.40

Packet mirroring in cloud network can be useful for:

- ☐ boosting traffic performance
- ☒ anomaly detection
- ☒ security analysis
- ☒ bug testing



Your answer is correct.

The correct answers are:

security analysis,

bug testing,

anomaly detection

Question 14

Correct

Mark 0.40 out of 0.40

In a cloud environment, vertical scalability means that:

- ☒ it doesn't require additional components
- ☐ it is compatible only with stateless applications
- ☐ it doesn't require restarting the service
- ☒ it might be the only approach for certain components (RDBMS)



Your answer is correct.

The correct answers are:

it doesn't require additional components,

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

Question **15**

Correct

Mark 0.40 out of 0.40

A resilient system is one that is:

- ☒ predictable
- ☒ self healing
- ☐ self contained
- ☒ adaptive
- ☐ self managed



Your answer is correct.

The correct answers are:

adaptive,
self healing,
predictable

Question **16**

Correct

Mark 0.40 out of 0.40

Which of the following represent types of load balancers?

- ☒ HTTP
- ☒ TCP/UDP
- ☒ DNS
- ☐ NAT



Your answer is correct.

The correct answers are:

HTTP,
TCP/UDP,
DNS

Question **17**

Correct

Mark 0.40 out of 0.40

Why is loose coupling beneficial?

- ☐ Usually makes the system more scalable
- ☐ Improves network performance
- ☐ We should prefer strong coupling instead
- ☒ Facilitates better maintainability and extensibility



Your answer is correct.

The correct answer is:

Facilitates better maintainability and extensibility

Question **18**

Correct

Mark 0.40 out of 0.40

Which of the following are HTTP idempotent methods?

- ☐ POST
- ☒ PUT
- ☒ DELETE
- ☒ HEAD
- ☒ GET



Your answer is correct.

The correct answers are:

GET,

HEAD,

DELETE,

PUT

Question **19**

Correct

Mark 0.40 out of 0.40

OAuth 2.0 is a(n):

- ☒ Authorization protocol
- ☐ Multi-factor authentication service
- ☐ Authentication protocol
- ☐ User management service



Your answer is correct.

The correct answer is:

Authorization protocol

Question **20**

Correct

Mark 0.40 out of 0.40

When can a service be considered serverless?

- ☒ When you pay only for what you use
- ☒ When the service can scale down to 0
- ☒ When you don't have to setup any infrastructure
- ☒ When you don't have to provision capacity



Your answer is correct.

The correct answers are:

When you don't have to setup any infrastructure,

When you don't have to provision capacity,

When you pay only for what you use,

When the service can scale down to 0

Question **21**

Incorrect

Mark 0.00 out of 0.40

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

- ☐ warm standby, hot site, pilot light, backup and restore
- ☒ backup and restore, warm standby, hot site, pilot light
- ☐ backup and restore, pilot light, warm standby, hot site
- ☐ warm standby, hot site, backup and restore, pilot light



Your answer is incorrect.

The correct answer is:

backup and restore, pilot light, warm standby, hot site

Question **22**

Partially correct

Mark 0.20 out of 0.40

Asymmetric encryption is suited for:

- ☐ High-performance compute
- ☐ Large payloads
- ☒ Small payloads
- ☐ Digital signatures (identity verification)



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Small payloads,

Digital signatures (identity verification)

Question **23**

Correct

Mark 0.40 out of 0.40

Which is true for a graph database model?

- ☒ nodes contain properties (key-value pairs)
- ☐ relationships can't contain properties
- ☒ contains nodes and relationships
- ☐ relationships are not directed



Your answer is correct.

The correct answers are:

contains nodes and relationships,

nodes contain properties (key-value pairs)

Question **24**

Partially correct

Mark 0.20 out of 0.40

Why are serverless databases usually NoSQL?

- ☒ Because NoSQL databases usually scale better
- ☐ Because NoSQL databases are simpler (e.g. no ACID)
- ☐ Due to licensing limitations of SQL databases
- ☐ Because data is non-relational in most cases anyway



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question **25**

Correct

Mark 0.40 out of 0.40

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

- ☐ Create a dedicated admin user used only when needed
- ☐ Enable MFA
- ☐ Relax the security policies when needed
- ☒ Leverage features that enable just-in-time privileges



Your answer is correct.

The correct answer is:

Leverage features that enable just-in-time privileges

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Started on	Wednesday, 13 January 2021, 6:00 PM
State	Finished
Completed on	Wednesday, 13 January 2021, 6:19 PM
Time taken	19 mins 24 secs
Marks	8.60/10.00
Grade	8.60 out of 10.00 (86%)

Question **1**

Partially correct

Mark 0.13 out of 0.40

What are containers useful for?

- ☒ keeping dependencies isolated from the application
- ☒ creating similar environments
- ☐ keeping computer clean
- ☒ quickly provisioning dependencies locally

Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

creating similar environments,

quickly provisioning dependencies locally,

keeping computer clean

Question **2**

Correct

Mark 0.40 out of 0.40

When choosing cloud services, the price plan can be:

☒ Tiered☐ Transaction-based☒ Fixed☒ Dynamic

Your answer is correct.

The correct answers are:

Fixed,

Tiered,

Dynamic

Question **3**

Partially correct

Mark 0.27 out of 0.40

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

☐ tunable consistency☐ no consistency☒ strong consistency☒ eventual consistency

Your answer is partially correct.

You have correctly selected 2.

The correct answers are:

strong consistency,

eventual consistency,

tunable consistency

Question **4**

Correct

Mark 0.40 out of 0.40

OpenID Connect is a(n):

- ☐ Inter-service communication protocol
- ☐ SSO protocol
- ☒ Authentication protocol built on top of OAuth 2.0
- ☐ Authorization protocol built on top of OAuth 2.0



Your answer is correct.

The correct answer is:

Authentication protocol built on top of OAuth 2.0

Question **5**

Correct

Mark 0.40 out of 0.40

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

- ☐ Resource Servers
- ☒ Custom built OpenID Connect systems
- ☒ Social platforms such as Facebook and Google
- ☐ SaaS services



Your answer is correct.

The correct answers are:

Social platforms such as Facebook and Google,

Custom built OpenID Connect systems

Question **6**

Correct

Mark 0.40 out of 0.40

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

- ☐ encryption
- ☐ authorization
- ☒ runtime checking
- ☐ authentication
- ☐ input validation



Your answer is correct.

The correct answer is:
runtime checking

Question **7**

Correct

Mark 0.40 out of 0.40

In a cloud environment, vertical scalability means that:

- ☐ it is compatible only with stateless applications
- ☒ it might be the only approach for certain components (RDBMS)
- ☐ it doesn't require restarting the service
- ☒ it doesn't require additional components



Your answer is correct.

The correct answers are:
it doesn't require additional components,
it might be the only approach for certain components (RDBMS)

Question **8**

Correct

Mark 0.40 out of 0.40

The role of the hypervisor is to:

- ☐ encrypt disk
- ☒ translate and limit instructions
- ☐ manage users
- ☒ create and manage guest machines



Your answer is correct.

The correct answers are:

create and manage guest machines,

translate and limit instructions

Question **9**

Correct

Mark 0.40 out of 0.40

The 12 Factor App is a(n)

- ☐ Authentication application
- ☒ Methodology for building scalable and maintainable software
- ☐ Framework for building microservices



Your answer is correct.

The correct answer is:

Methodology for building scalable and maintainable software

Question **10**

Partially correct

Mark 0.20 out of 0.40

Infrastructure as a Service is best used for:

- ☐ when ultra-high performance is a must
- ☐ when you don't want to be in control
- ☒ first migration stages (lift and shift)
- ☐ when you need vendor lock-in



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

first migration stages (lift and shift),

when ultra-high performance is a must

Question **11**

Correct

Mark 0.40 out of 0.40

When can a service be considered serverless?

- ☒ When you don't have to setup any infrastructure
- ☒ When you don't have to provision capacity
- ☒ When you pay only for what you use
- ☒ When the service can scale down to 0



Your answer is correct.

The correct answers are:

When you don't have to setup any infrastructure,

When you don't have to provision capacity,

When you pay only for what you use,

When the service can scale down to 0

Question **12**

Partially correct

Mark 0.20 out of 0.40

Which are the 2 main API styles?

- ☒ REST
- ☐ Graph
- ☒ Entity Oriented
- ☐ Procedure Oriented

✗

✓

Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

Procedure Oriented,

Entity Oriented

Question **13**

Correct

Mark 0.40 out of 0.40

Why would you consider GraphQL instead of REST?

- ☒ Because we can specify which fields to fetch leading to lower data usage
- ☐ Because it is easier to cache
- ☒ Because it has built in introspection
- ☐ Because it scales better

✓

✓

Your answer is correct.

The correct answers are:

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

Because it has built in introspection

Question **14**

Correct

Mark 0.40 out of 0.40

The CAP theorem referes to:

- ☐ Capacity, Availability, Performance
- ☒ Consistency, Availability, Partition Tolerance
- ☐ Credibility, Accessibility, Partition Tolerance
- ☐ Credibility, Accessibility, Performance



Your answer is correct.

The correct answer is:

Consistency, Availability, Partition Tolerance

Question **15**

Partially correct

Mark 0.20 out of 0.40

Which are two effective measures to improve infrastructure security?

- ☒ MFA for the users
- ☐ MFA for the development team
- ☐ Implement OAuth 2.0
- ☒ Reduce the attack surface as much as possible



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

MFA for the development team,

Reduce the attack surface as much as possible

Question **16**

Correct

Mark 0.40 out of 0.40

What makes a system highly available?

- ☒ data
- ☒ network
- ☒ hardware
- ☒ software



Your answer is correct.

The correct answers are:

hardware,
software,
data,
network

Question **17**

Correct

Mark 0.40 out of 0.40

Which of the following are protocols used by the internet?

- ☒ IP
- ☒ BGP
- ☒ RIP
- ☒ OSPF



Your answer is correct.

The correct answers are:

IP,
BGP,
RIP,
OSPF

Question **18**

Correct

Mark 0.40 out of 0.40

What is the shared responsibility model?

- ☐ A framework for finding out the optimal security approach
- ☐ A model describing the responsibility within a development team
- ☒ A model describing the responsibility of the cloud provider and the customer with regards to security
- ☐ A requirement for the ISO 27001 standard



Your answer is correct.

The correct answer is:

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

Question **19**

Incorrect

Mark 0.00 out of 0.40

Which of the following approaches has the ideal coupling?

- ☒ Separated services communicating through REST interfaces
- ☐ Separated services communicating through RPC
- ☐ Services deployed together as a monolith
- ☐ Separated services communicating through a message queue



Your answer is incorrect.

The correct answer is:

Separated services communicating through a message queue

Question **20**

Correct

Mark 0.40 out of 0.40

A resilient system is one that is:

- ☐ self managed
- ☒ predictable
- ☐ self contained
- ☒ adaptive
- ☒ self healing



Your answer is correct.

The correct answers are:

adaptive,
self healing,
predictable

Question **21**

Correct

Mark 0.40 out of 0.40

Why are serverless databases usually NoSQL?

- ☐ Due to licensing limitations of SQL databases
- ☐ Because data is non-relational in most cases anyway
- ☒ Because NoSQL databases usually scale better
- ☒ Because NoSQL databases are simpler (e.g. no ACID)



Your answer is correct.

The correct answers are:

Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question **22**

Correct

Mark 0.40 out of 0.40

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

- ☐ When it's enough if the message is processed by at least one client
- ☐ When we don't want to store messages
- ☐ When we want to reduce the load on the clients
- ☒ When we might want to replay previous messages/events



Your answer is correct.

The correct answer is:

When we might want to replay previous messages/events

Question **23**

Correct

Mark 0.40 out of 0.40

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

- ☒ backup and restore, pilot light, warm standby, hot site
- ☐ warm standby, hot site, backup and restore, pilot light
- ☐ backup and restore, warm standby, hot site, pilot light
- ☐ warm standby, hot site, pilot light, backup and restore



Your answer is correct.

The correct answer is:

backup and restore, pilot light, warm standby, hot site

Question **24**

Correct

Mark 0.40 out of 0.40

A key-value database offers:

- ☐ ultra low but not consistent latency
- ☒ ultra low and consistent latency
- ☐ high but not consistent throughput
- ☒ high and consistent throughput



Your answer is correct.

The correct answers are:

ultra low and consistent latency,

high and consistent throughput

Question **25**

Correct

Mark 0.40 out of 0.40

Which are some common concerns when working with queues?

- ☒ The same message might be delivered multiple times
- ☐ The message is lost if there are no consumers
- ☐ The consumers might get overloaded
- ☒ Messages might be out of order



Your answer is correct.

The correct answers are:

Messages might be out of order,

The same message might be delivered multiple times

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Started on	Wednesday, 13 January 2021, 6:00 PM
State	Finished
Completed on	Wednesday, 13 January 2021, 6:20 PM
Time taken	20 mins
Marks	6.00/10.00
Grade	6.00 out of 10.00 (60%)

Question **1**

Correct

Mark 0.40 out of 0.40

Among the techniques for achieving high availability are:

- ☒ multi availability zones
- ☒ multi region
- ☐ real time operating system
- ☒ floating/elastic IP

Your answer is correct.

The correct answers are:

multi region,
multi availability zones,
floating/elastic IP

Question **2**

Incorrect

Mark 0.00 out of 0.40

Monitoring of the virtual host is useful to ensure:

- ☐ knowing the size of the database
- ☒ knowing when to scale (up/down, in/out)
- ☒ knowing your current price to pay
- ☐ if provider respects contracts (SLA)



Your answer is incorrect.

The correct answers are:

if provider respects contracts (SLA),

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

Question **3**

Correct

Mark 0.40 out of 0.40

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

- ☒ Owner Claim
- ☒ Pass-through Hash
- ☒ Authorization Code with PKCE
- ☒ Authorization Code
- ☒ Resource Owner Password Credentials



Your answer is correct.

The correct answers are:

Authorization Code,

Resource Owner Password Credentials, Authorization Code with PKCE

Question 4

Correct

Mark 0.40 out of 0.40

Which are the 2 main API styles?

- ☐ REST
- ☒ Entity Oriented
- ☒ Procedure Oriented
- ☐ Graph



Your answer is correct.

The correct answers are:

Procedure Oriented,

Entity Oriented

Question 5

Correct

Mark 0.40 out of 0.40

Which of the following represent types of load balancers?

- ☒ DNS
- ☒ HTTP
- ☐ NAT
- ☒ TCP/UDP



Your answer is correct.

The correct answers are:

HTTP,

TCP/UDP,

DNS

Question **6**

Not answered

Marked out of 0.40

In a cloud environment horizontal scaling means that:

- ☐ it is compatible with any application architecture
- ☐ it modifies existing VMs
- ☐ it requires load balancers
- ☐ it can scale infinitely

Your answer is incorrect.

The correct answers are:

it can scale infinitely,

it requires load balancers

Question **7**

Correct

Mark 0.40 out of 0.40

Why is loose coupling beneficial?

- ☐ We should prefer strong coupling instead
- ☒ Facilitates better maintainability and extensibility
- ☐ Improves network performance
- ☐ Usually makes the system more scalable



Your answer is correct.

The correct answer is:

Facilitates better maintainability and extensibility

Question **8**

Correct

Mark 0.40 out of 0.40

What are CDNs good for?

- ☐ reduce resources
- ☒ optimize costs
- ☒ improve security
- ☒ improve load times



Your answer is correct.

The correct answers are:

improve load times,

optimize costs,

improve security

Question **9**

Partially correct

Mark 0.10 out of 0.40

What makes a system highly available?

- ☐ hardware
- ☐ data
- ☒ network
- ☐ software



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

hardware,

software,

data,

network

Question **10**

Incorrect

Mark 0.00 out of 0.40

The relationship between TLS and SSL is:

- ☐ TLS handles communication while SSL handles identity verification
- ☐ TLS is the successor of SSL
- ☒ TLS is built on top of SSL
- ☐ They are not related



Your answer is incorrect.

The correct answer is:

TLS is the successor of SSL

Question **11**

Correct

Mark 0.40 out of 0.40

FaaS stands for:

- ☒ Functions as a service
- ☐ Frontend as a service
- ☐ Functionality as a service



Your answer is correct.

The correct answer is:

Functions as a service

Question **12**

Correct

Mark 0.40 out of 0.40

Which of the following represent HTTP safe methods?

☒ HEAD☐ PATCH☒ GET☐ POST

Your answer is correct.

The correct answers are:

GET,

HEAD

Question **13**

Correct

Mark 0.40 out of 0.40

Which of the following are protocols used by the internet?

☒ BGP☒ IP☒ OSPF☒ RIP

Your answer is correct.

The correct answers are:

IP,

BGP,

RIP,

OSPF

Question **14**

Correct

Mark 0.40 out of 0.40

What are containers useful for?

- ☐ keeping dependencies isolated from the application
- ☒ creating similar environments
- ☒ quickly provisioning dependencies locally
- ☒ keeping computer clean



Your answer is correct.

The correct answers are:

creating similar environments,

quickly provisioning dependencies locally,

keeping computer clean

Question **15**

Not answered

Marked out of 0.40

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

- ☐ The clients pull messages from both types of services
- ☐ The client has the pull the messages from queues while pub/sub pushes the messages to the client
- ☐ The client has the pull the messages from pub/sub while queues push the messages to the client
- ☐ Both types of services push the message to the clients

Your answer is incorrect.

The correct answer is:

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

Question **16**

Correct

Mark 0.40 out of 0.40

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

- ☐ availability= $\text{uptime}/\text{downtime} + \text{uptime}$
- ☐ availability= $\text{uptime}/\text{uptime} + \text{downtime}$
- ☒ availability= $\text{uptime}/(\text{downtime} + \text{uptime})$
- ☐ availability= $\text{uptime}/\text{downtime}$



Your answer is correct.

The correct answer is:

availability= $\text{uptime}/(\text{downtime} + \text{uptime})$

Question **17**

Incorrect

Mark 0.00 out of 0.40

The 12 Factor App is a(n)

- ☐ Methodology for building scalable and maintainable software
- ☐ Authentication application
- ☒ Framework for building microservices



Your answer is incorrect.

The correct answer is:

Methodology for building scalable and maintainable software

Question **18**

Correct

Mark 0.40 out of 0.40

The CAP theorem referes to:

- ☒ Consistency, Availability, Partition Tolerance
- ☐ Capacity, Availability, Performance
- ☐ Credibility, Accessibility, Performance
- ☐ Credibility, Accessibility, Partition Tolerance



Your answer is correct.

The correct answer is:

Consistency, Availability, Partition Tolerance

Question **19**

Partially correct

Mark 0.30 out of 0.40

Some of the load balancers features are:

- ☒ caching
- ☒ routing based on path
- ☐ health checks
- ☒ port mapping



Your answer is partially correct.

You have correctly selected 3.

The correct answers are:

routing based on path,

health checks,

port mapping,

caching

Question **20**

Partially correct

Mark 0.20 out of 0.40

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
- ☐ Because cloud systems work best with REST APIs



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

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

Because the microservices architecture is adopted more frequently

Question **21**

Correct

Mark 0.40 out of 0.40

Why are serverless databases usually NoSQL?

- ☐ Because data is non-relational in most cases anyway
- ☒ Because NoSQL databases usually scale better
- ☐ Due to licensing limitations of SQL databases
- ☒ Because NoSQL databases are simpler (e.g. no ACID)



Your answer is correct.

The correct answers are:

Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question **22**

Not answered

Marked out of 0.40

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

- ☐ runs one or more containers
- ☐ is managed by the operating system
- ☐ is the smallest deployment unit
- ☐ can span multiple nodes

Your answer is incorrect.

The correct answers are:

is the smallest deployment unit,

runs one or more containers

Question **23**

Incorrect

Mark 0.00 out of 0.40

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

- ☐ document, columnar, key-value, graph
- ☐ graph, columnar, document, key-value
- ☐ graph, document, columnar, key-value
- ☒ key-value, document, columnar, graph



Your answer is incorrect.

The correct answer is:

graph, columnar, document, key-value

Question **24**

Partially correct

Mark 0.20 out of 0.40

Which is true for a graph database model?

- ☐ relationships are not directed
- ☒ contains nodes and relationships
- ☐ relationships can't contain properties
- ☐ nodes contain properties (key-value pairs)



Your answer is partially correct.

You have correctly selected 1.

The correct answers are:

contains nodes and relationships,

nodes contain properties (key-value pairs)

Question **25**

Incorrect

Mark 0.00 out of 0.40

A key-value database offers:

- ☒ high and consistent throughput
- ☒ ultra low but not consistent latency
- ☐ high but not consistent throughput
- ☐ ultra low and consistent latency



Your answer is incorrect.

The correct answers are:

ultra low and consistent latency,

high and consistent throughput

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1. Which are the 2 main API styles??
 - a. REST
 - b. Procedure Oriented
 - c. Entity Oriented
 - d. Graph
2. What is the shared responsibility model?
 - a. A model describing the responsibility of the cloud and the customer with regards of security
 - b. A requirement for the ISO 27001 standard
 - c. A model describing the responsibility within a development team
 - d. A framework for finding out the optimal security approach
3. Which of the following represent types of load balancers?
 - a. NAT
 - b. HTTP
 - c. DNS
 - d. TCP/PPD
4. Related to user access and permissions for infrastructure security, confidentiality enforces
 - a. usage of password vaults
 - b. two factor authentication
 - c. saving data only in private clouds
 - d. encryption
5. Monitoring of the virtual host is useful to ensure:
 - a. knowing your current price to pay
 - b. knowing when to scale (up/down, in/out)
 - c. knowing the size of the database
 - d. if provider respects contracts (SLA)
6. Which of the following characteristics is improved by designing and building applications in cloud environments?
 - a. Control
 - b. Scalability
 - c. Availability
 - d. Security
7. FaaS stands for
 - a. Functions as a service
 - b. Functionality as a service
 - c. Frontend as a service
8. In a cloud environment the role of a load balancer is to:
 - a. balance traffic across multiple targets
 - b. A/B testing
 - c. serve as a single point of entry
 - d. monitor the health of target resources

9. Among the techniques for achieving high availability are:
- a. floating/elastic IP
 - b. multi region
 - c. real time operating system
 - d. multi availability zones
10. What makes a system highly available?
- a. data
 - b. software
 - c. hardware
 - d. network
11. Infrastructure security is concerned with
- a. cloud user
 - b. database user
 - c. operating system user
 - d. application user
12. What of the following components are not managed by the cloud provider in a infrastructure as a Service model?
- a. Storage
 - b. Network
 - c. Operating system
 - d. Application
 - e. Data
13. Which are the two effective measures to improve infrastructure security?
- a. Implement OAuth 2.0
 - b. MFA for the users
 - c. MFA for the development team
 - d. Reduce the attack surface as much as possible

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

moodleubb

MFA for the development team,
Reduce the attack surface as much as possible

Question 14
Correct
Mark 0.40 out of 0.40
Flag question

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

- ☒ The client has the pull the messages from queues while pub/sub pushes the messages to the client
- ☐ The client has the pull the messages from pub/sub while queues push the messages to the client
- ☐ The clients pull messages from both types of services
- ☐ Both types of services push the message to the clients

Your answer is correct.
The correct answer is:
The client has the pull the messages from queues while pub/sub pushes the messages to the client

Question 15
Correct
Mark 0.40 out of 0.40
Flag question

What are containers useful for?

- ☒ creating similar environments
- ☒ keeping computer clean
- ☐ keeping dependencies isolated from the application
- ☒ quickly provisioning dependencies locally

15. What are containers useful for?

moodleubb

Your answer is correct.
The correct answer is:
The client has the pull the messages from queues while pub/sub pushes the messages to the client

Question 15
Correct
Mark 0.40 out of 0.40
Flag question

What are containers useful for?

- ☒ creating similar environments
- ☒ keeping computer clean
- ☐ keeping dependencies isolated from the application
- ☒ quickly provisioning dependencies locally

Your answer is correct.
The correct answers are:
creating similar environments,
quickly provisioning dependencies locally,
keeping computer clean

Question 16
Correct

When choosing cloud services, the price plan can be:

16. When choosing cloud services, the price plan can be:

moodleubb

creating similar environments,
quickly provisioning dependencies locally,
keeping computer clean

Question 16
Correct
Mark 0.40 out of 0.40
Flag question

When choosing cloud services, the price plan can be:

- ☒ Dynamic
- ☒ Fixed
- ☒ Tiered
- ☐ Transaction-based

Your answer is correct.
The correct answers are:
Fixed,
Tiered,
Dynamic

Question 17
Correct
Mark 0.40 out of 0.40
Flag question

Virtual CPUs might be:

- ☒ timeshares of real CPU core

17. Virtual CPUs might be:

moodleubb

Your answer is correct.
The correct answers are:
Fixed,
Tiered,
Dynamic

Question 17
Correct
Mark 0.40 out of 0.40
Flag question

Virtual CPUs might be:

- ☒ timeshares of real CPU core
- ☐ first thread of each core
- ☒ logical core
- ☒ physical core

Your answer is correct.
The correct answers are:
timeshares of real CPU core,
physical core,
logical core

Question 18
Correct

A resilient system is one that is:

18. A resilient system is one that is:

The screenshot shows a Moodle quiz review interface. At the top, there are browser tabs for 'The Neighbourhood - Soft...', 'Exam: Attempt review', and 'WhatsApp'. The address bar shows the URL 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The page header includes 'moodleubb' and a user profile for 'Razvan Atanasov'. The main content area displays 'Question 18' with a status of 'Correct' and a mark of '0.40 out of 0.40'. The question text is 'A resilient system is one that is:'. Below the question, there are five options: 'adaptive', 'self healing', 'self managed', 'predictable', and 'self contained'. The first four options are checked, and each has a green checkmark to its right. Below the options, a feedback message states 'Your answer is correct. The correct answers are: adaptive, self healing, predictable'. At the bottom, 'Question 19' is partially visible with a status of 'Partially correct' and a mark of '0.20 out of 0.40'.

timeshares or near CPU core,
physical core,
logical core

Question 18
Correct
Mark 0.40 out of 0.40
Flag question

A resilient system is one that is:

- ☒ adaptive
- ☒ self healing
- ☐ self managed
- ☒ predictable
- ☐ self contained

Your answer is correct.
The correct answers are:
adaptive,
self healing,
predictable

Question 19
Partially correct
Mark 0.20 out of 0.40

Why would you consider GraphQL instead of REST?

- ☐ Because it is easier to cache

19. Why would you consider GraphQL instead of REST?

The screenshot shows a Moodle quiz review interface for 'Question 19'. The status is 'Partially correct' with a mark of '0.20 out of 0.40'. The question text is 'Why would you consider GraphQL instead of REST?'. There are four options: 'Because it is easier to cache', 'Because it scales better', 'Because we can specify which fields to fetch leading to lower data usage', and 'Because it has built in introspection'. Only the third option is checked, and it has a green checkmark to its right. Below the options, a feedback message states 'Your answer is partially correct. You have correctly selected 1. The correct answers are: Because we can specify which fields to fetch leading to lower data usage, Because it has built in introspection'. At the bottom, 'Question 20' is partially visible with the text 'When can a service be considered serverless?'.

Your answer is correct.
The correct answers are:
adaptive,
self healing,
predictable

Question 19
Partially correct
Mark 0.20 out of 0.40
Flag question

Why would you consider GraphQL instead of REST?

- ☐ Because it is easier to cache
- ☐ Because it scales better
- ☒ Because we can specify which fields to fetch leading to lower data usage
- ☐ Because it has built in introspection

Your answer is partially correct.
You have correctly selected 1.
The correct answers are:
Because we can specify which fields to fetch leading to lower data usage,
Because it has built in introspection

Question 20
When can a service be considered serverless?

20. When can a service be considered serverless?

The screenshot shows a Moodle quiz review interface. At the top, a navigation bar includes links to 'The Neighbourhood - Soft...', 'Exam: Attempt review', and 'WhatsApp'. The browser address bar shows the URL 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The Moodle header displays 'moodleubb' and the user 'Razvan Atanasov'. The main content area features a feedback message: 'You have correctly selected 1. The correct answers are: Because we can specify which fields to fetch leading to lower data usage, Because it has built in introspection'. Below this, 'Question 20' is marked as 'Correct' with a score of 'Mark 0.40 out of 0.40'. The question text is 'When can a service be considered serverless?'. Four options are listed, each with a green checkmark indicating they are correct: 'When the service can scale down to 0', 'When you pay only for what you use', 'When you don't have to provision capacity', and 'When you don't have to setup any infrastructure'. A feedback box states 'Your answer is correct. The correct answers are: When you don't have to setup any infrastructure, When you don't have to provision capacity, When you pay only for what you use, When the service can scale down to 0'. 'Question 21' is partially visible below, marked as 'Incorrect'.

You have correctly selected 1.
The correct answers are:
Because we can specify which fields to fetch leading to lower data usage,
Because it has built in introspection

Question 20
Correct
Mark 0.40 out of 0.40
Flag question

When can a service be considered serverless?

- ☒ When the service can scale down to 0
- ☒ When you pay only for what you use
- ☒ When you don't have to provision capacity
- ☒ When you don't have to setup any infrastructure

Your answer is correct.
The correct answers are:
When you don't have to setup any infrastructure,
When you don't have to provision capacity,
When you pay only for what you use,
When the service can scale down to 0

Question 21
Incorrect

Why are serverless databases usually NoSQL?

21. Why are serverless databases usually noSQL?

The screenshot shows a Moodle quiz review interface. The navigation bar and header are identical to the previous screenshot. The main content area features a feedback message: 'Your answer is correct. The correct answers are: When you don't have to setup any infrastructure, When you don't have to provision capacity, When you pay only for what you use, When the service can scale down to 0'. Below this, 'Question 21' is marked as 'Incorrect' with a score of 'Mark 0.00 out of 0.40'. The question text is 'Why are serverless databases usually NoSQL?'. Four options are listed: 'Because NoSQL databases usually scale better' (correct, green checkmark), 'Due to licensing limitations of SQL databases' (incorrect, red X), 'Because data is non-relational in most cases anyway' (incorrect, empty checkbox), and 'Because NoSQL databases are simpler (e.g. no ACID)' (incorrect, empty checkbox). A feedback box states 'Your answer is incorrect. The correct answers are: Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)'. 'Question 22' is partially visible below, marked as 'Correct'.

Your answer is correct.
The correct answers are:
When you don't have to setup any infrastructure,
When you don't have to provision capacity,
When you pay only for what you use,
When the service can scale down to 0

Question 21
Incorrect
Mark 0.00 out of 0.40
Flag question

Why are serverless databases usually NoSQL?

- ☒ Because NoSQL databases usually scale better
- ☐ Due to licensing limitations of SQL databases
- ☐ Because data is non-relational in most cases anyway
- ☐ Because NoSQL databases are simpler (e.g. no ACID)

Your answer is incorrect.
The correct answers are:
Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question 22
Correct
Mark 0.40 out of 0.40

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

- ☒ is the smallest deployment unit

22. From the kubernetes terminology, we can say that a pod:

The screenshot shows a Moodle quiz review interface. At the top, there are browser tabs for 'The Neighbourhood - Soft...', 'Exam: Attempt review', and 'WhatsApp'. The address bar shows the URL 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The page header includes 'moodleubb' and a user profile for 'Razvan Atanasov'. The main content area displays the results for 'Question 22', which is marked 'Correct' with a score of '0.40 out of 0.40'. The question text is 'From the kubernetes terminology, we can say that a pod:'. Below the question, there are four multiple-choice options: 'Because NoSQL databases are simpler (e.g. no ACID)', 'is the smallest deployment unit', 'is managed by the operating system', and 'runs one or more containers'. The first option is selected and marked incorrect. The second and third options are marked correct with green checkmarks. The fourth option is marked incorrect. A feedback message states: 'Your answer is incorrect. The correct answers are: Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)'. Below this, another feedback message states: 'Your answer is correct. The correct answers are: is the smallest deployment unit, runs one or more containers'. At the bottom, 'Question 23' is partially visible, marked 'Incorrect'.

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

Your answer is incorrect.
The correct answers are:
Because NoSQL databases usually scale better, Because NoSQL databases are simpler (e.g. no ACID)

Question 22
Correct
Mark 0.40 out of 0.40
Flag question

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

- ☒ is the smallest deployment unit ✓
- ☐ is managed by the operating system
- ☒ runs one or more containers ✓
- ☐ can span multiple nodes

Your answer is correct.
The correct answers are:
is the smallest deployment unit,
runs one or more containers

Question 23
Incorrect

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

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

The screenshot shows a Moodle quiz review interface. At the top, there are browser tabs for 'The Neighbourhood - Soft...', 'Exam: Attempt review', and 'WhatsApp'. The address bar shows the URL 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The page header includes 'moodleubb' and a user profile for 'Razvan Atanasov'. The main content area displays the results for 'Question 23', which is marked 'Incorrect' with a score of '0.00 out of 0.40'. The question text is 'Which is the optimal approach for the least privilege principle when admin rights are required?'. Below the question, there are four multiple-choice options: 'Enable MFA', 'Relax the security policies when needed', 'Leverage features that enable just-in-time privileges', and 'Create a dedicated admin user used only when needed'. The last option is selected and marked incorrect with a red X. A feedback message states: 'Your answer is incorrect. The correct answer is: Leverage features that enable just-in-time privileges'. Below this, 'Question 24' is partially visible, marked 'Correct'.

The correct answers are:
is the smallest deployment unit,
runs one or more containers

Question 23
Incorrect
Mark 0.00 out of 0.40
Flag question

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

- ☐ Enable MFA
- ☐ Relax the security policies when needed
- ☐ Leverage features that enable just-in-time privileges
- ☒ Create a dedicated admin user used only when needed ✗

Your answer is incorrect.
The correct answer is:
Leverage features that enable just-in-time privileges

Question 24
Correct
Mark 0.40 out of 0.40
Flag question

Which is true for a graph database model?

- ☒ nodes contain properties (key-value pairs) ✓
- ☐ relationships can't contain properties
- ☐ relationships are not directed

24. Which is true for a graph database model?

The screenshot shows a Moodle quiz review page for a user named Razvan Atanasov. The browser tabs include 'The Neighbourhood - Soft...', 'Exam: Attempt review', and 'WhatsApp'. The URL is 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The page title is 'moodleubb'. The user's name 'Razvan Atanasov' is in the top right corner.

Below the user name, there is a notification bar with a red 'X' icon and the text: 'Create a dedicated admin user used only when needed'.

Below the notification bar, there is a feedback message: 'Your answer is incorrect. The correct answer is: Leverage features that enable just-in-time privileges'.

Below the feedback message, there is a question card for Question 24. The question is 'Which is true for a graph database model?'. The question is marked as 'Correct' with a score of '0.40 out of 0.40'. The question is a multiple-choice question. The options are:

- ☒ nodes contain properties (key-value pairs) ✓
- ☐ relationships can't contain properties
- ☐ relationships are not directed
- ☒ contains nodes and relationships ✓

Below the question card, there is another feedback message: 'Your answer is correct. The correct answers are: contains nodes and relationships, nodes contain properties (key-value pairs)'.

Below the feedback message, there is a question card for Question 25. The question is 'A key-value database offers:'. The question is marked as 'Correct'.

25. A key-value database offers:

The screenshot shows a web browser window with multiple tabs. The active tab is 'Exam: Attempt review' at the URL 'moodle.cs.ubbcluj.ro/mod/quiz/review.php?attempt=229577&cmid=3090#'. The browser's address bar and tabs are visible at the top. Below the browser window, the Moodle interface is shown. The page header includes the Moodle logo and the user's name 'Razvan Atanasov'. The main content area displays the quiz results for Question 25. On the left, a sidebar indicates 'Question 25', 'Correct', and 'Mark 0.40 out of 0.40'. The question text is 'A key-value database offers:'. Below it, four options are listed with checkboxes: 'ultra low but not consistent latency', 'high and consistent throughput', 'ultra low and consistent latency', and 'high but not consistent throughput'. The first and third options are checked, and green checkmarks are visible to their right. Above the options, a yellow box states 'The correct answers are: contains nodes and relationships, nodes contain properties (key-value pairs)'. Below the options, another yellow box states 'Your answer is correct. The correct answers are: ultra low and consistent latency, high and consistent throughput'. At the bottom of the page, there are links for 'Announcements', a 'Jump to...' dropdown menu, and buttons for 'Finish review' and 'Resource Cleanup'. The Windows taskbar is visible at the very bottom of the image.

The correct answers are:
contains nodes and relationships,
nodes contain properties (key-value pairs)

Question 25
Correct
Mark 0.40 out of 0.40
Flag question

A key-value database offers:

- ☐ ultra low but not consistent latency
- ☒ high and consistent throughput
- ☒ ultra low and consistent latency
- ☐ high but not consistent throughput

Your answer is correct.
The correct answers are:
ultra low and consistent latency,
high and consistent throughput

Announcements Jump to... Finish review Resource Cleanup

Infrastructure as a Service is best used for:

first mitigation
ultra high plm