

CA Test -2 Virtualization and Cloud Computing

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Multiple Choice Questions.

Q1. LPU is experiencing slow website loading times for its global user base. 1 point
The company decides to implement a Content Delivery Network (CDN) to improve performance. What is the primary purpose of using a CDN in this scenario?

- ☐ Data security
- ☒ Load balancing
- ☐ Content distribution
- ☐ Network monitoring

[Clear selection](#)



Q2. Amazon website deploys a CDN to enhance the delivery speed of product images and static content. Which CDN feature is most likely to contribute to reducing latency and accelerating content delivery? 1 point

- ☒ Caching
- ☐ Encryption
- ☐ Compression
- ☐ Authentication

Clear selection

Q3. A business decides to implement a CDN to reduce the origin server's load and improve overall website performance. Which CDN functionality helps in distributing traffic across multiple servers to prevent overloading a single server? 1 point

- ☒ Load balancing
- ☐ Caching
- ☐ Encryption
- ☐ Compression

Clear selection



Q4. A cloud service provider offers a CDN solution that allows customers to scale their content delivery globally. What characteristic of CDN architecture enables this scalability? 1 point

- ☐ Centralized server model
- ☐ Peer-to-peer distribution
- ☒ Decentralized edge servers
- ☐ Unicast transmission

Clear selection

Q5. A large e-commerce platform has implemented a multi-CDN strategy to enhance its global content delivery. What is the primary advantage of using a multi-CDN approach in this scenario? 1 point

- ☐ Cost reduction
- ☒ Improved redundancy and reliability
- ☐ Simplified management
- ☐ Reduced latency for local users

Clear selection



Q6. A media streaming company utilizes multiple CDNs to deliver video content. What is a potential challenge that can be mitigated by adopting a multi-CDN strategy in this context?

1 point

- ☐ Decreased bandwidth usage
- ☐ Lower content adaptation capabilities
- ☒ Reduced risk of single points of failure
- ☐ Slower content delivery due to increased complexity

Clear selection

Q7. A global corporation is concerned about minimizing the impact of network outages on its services. How does a multi-CDN approach contribute to the resilience of the company's online presence?

1 point

- ☐ By centralizing all content on a single CDN
- ☐ By relying on a single data center for content distribution
- ☒ By diversifying CDN providers and infrastructure
- ☐ By using multiple CDNs for separate regions

Clear selection



Q8. A company is exploring the adoption of multi-CDN to improve content delivery performance. What key factor should be considered when selecting multiple CDN providers for this strategy?

1 point

- ☐ Uniform pricing models
- ☐ Similar geographic coverage
- ☒ Redundant features
- ☐ Consistent caching mechanisms

Clear selection

Q9. A news website relies on a multi-CDN setup to deliver breaking news quickly to users worldwide. What benefit does a multi-CDN architecture provide in terms of content availability during traffic spikes?

1 point

- ☐ Load balancing
- ☒ Elastic scaling
- ☐ Enhanced encryption
- ☐ Prefetching mechanisms

Clear selection



Q10. A global e-learning platform wants to enhance the performance of its online courses by leveraging multiple CDNs. How does a meta-CDN add value in this context? 1 point

- ☐ a) By providing redundant CDNs for each course
- ☒ b) By dynamically selecting the best-performing CDN for each user
- ☐ c) By encrypting content across multiple CDNs
- ☐ d) By caching content on a centralized server

Clear selection

Q11. An e-commerce company uses a meta-CDN to streamline the delivery of its product images, videos, and static content. What is a key benefit of a meta-CDN in terms of content optimization? 1 point

- ☐ a) Improved compression algorithms
- ☐ b) Enhanced content encryption
- ☒ c) Intelligent content routing across CDNs
- ☐ d) Faster local caching mechanisms

Clear selection



Q12. A cloud service provider offers a meta-CDN solution for businesses seeking centralized control over their content delivery strategy. What role does the meta-CDN play in optimizing the user experience?

1 point

- ☐ a) Distributing content across multiple data centers
- ☐ b) Aggregating analytics from different CDNs
- ☐ c) Encrypting content for secure delivery
- ☐ d) Implementing region-specific caching policies

Q13. An online portal uses a meta-CDN to efficiently deliver breaking news articles. What advantage does a meta-CDN provide in terms of scalability during sudden traffic spikes?

1 point

- ☐ a) Load balancing across CDNs
- ☒ b) Elastic scaling of centralized resources
- ☐ c) Prefetching mechanisms for content
- ☐ d) Enhanced encryption protocols

[Clear selection](#)

Q14. A mobile application requires heavy computational resources for real-time image processing. What type of mobile cloud service can offload the computational tasks to the cloud to improve the application's performance? 1 point

- ☐ a) Mobile cloud storage
- ☐ b) Mobile cloud synchronization
- ☒ c) Mobile cloud processing
- ☐ d) Mobile cloud backup

Clear selection

Q15. A user wants to ensure that their contacts, photos, and app settings are automatically backed up in case of device loss or failure. What mobile cloud computing service aligns with this need? 1 point

- ☐ a) Mobile cloud synchronization
- ☐ b) Mobile cloud storage
- ☒ c) Mobile cloud backup
- ☐ d) Mobile cloud processing

Clear selection



Q16. A mobile user is concerned about the security of their data when using mobile cloud services. Which feature is crucial for ensuring the confidentiality and integrity of data in mobile cloud computing? 1 point

- ☐ a) Multi-device synchronization
- ☒ b) End-to-end encryption
- ☐ c) Scalable processing
- ☐ d) Automatic backup

Clear selection

Q17. A company decides to adopt an Intercloud strategy to leverage services from multiple cloud providers. What is a potential challenge that the organization might face in terms of data and application portability? 1 point

- ☒ a) Seamless interoperability
- ☐ b) Vendor lock-in
- ☐ c) Standardized APIs
- ☐ d) Unified management interface

Clear selection



Q18. XYZ Corporation is planning to deploy a machine learning model for predicting customer preferences based on historical data. They want to leverage the scalability and flexibility of the cloud for this purpose. Which cloud service would be most suitable for hosting and deploying their machine learning model?

1 point

- ☐ a) Infrastructure as a Service (IaaS)
- ☒ b) Platform as a Service (PaaS)
- ☐ c) Software as a Service (SaaS)
- ☐ d) None

Clear selection

Q19. A data science team is working on a project that requires significant computational resources for training complex deep learning models. The team needs on-demand access to GPUs and TPUs. Which cloud service would be most suitable for this scenario?

1 point

- ☐ a) Google Cloud Storage
- ☐ b) Microsoft Azure Blob Storage
- ☒ c) Amazon EC2 Instances with GPU/TPU support
- ☐ d) AliBaba Cloud Services

Clear selection



Q20. A startup company is developing a natural language processing (NLP) application that requires access to pre-trained models and APIs. The company wants to focus on application development without managing the underlying infrastructure. Which cloud service model is the most appropriate for their needs? 1 point

- ☐ a) Infrastructure as a Service (IaaS)
- ☒ b) Platform as a Service (PaaS)
- ☐ c) Software as a Service (SaaS)
- ☐ d) Artificial Intelligence as a Service (AlaaS)

Clear selection

Q21. Company XYZ is building a complex deep learning model that requires extensive training on a large dataset. They are concerned about the cost associated with using cloud resources for the training process. Which cloud pricing model would be most cost-effective for this scenario? 1 point

- ☒ a) On-Demand Pricing
- ☐ b) Reserved Instances
- ☐ c) Spot Instances
- ☐ d) Resource distribution

Clear selection



Q22. An organization is implementing a real-time image recognition system using machine learning. They require low-latency processing and want to deploy the model close to the end-users. Which cloud service feature would be essential for achieving low-latency processing? 1 point

- ☒ a) Cloud CDN (Content Delivery Network)
- ☐ b) Multi-Region Deployment
- ☐ c) Elastic Load Balancing
- ☐ d) Resource distribution

Clear selection

Q23. A company is developing a machine learning model for sentiment analysis of customer reviews. They want to incorporate external data sources for better accuracy. Which cloud service provides a platform for integrating external data seamlessly into machine learning workflows? 1 point

- ☒ a) Amazon SageMaker
- ☐ b) Google Cloud AutoML
- ☐ c) Azure Machine Learning Studio
- ☐ d) Alibaba AI Services

Clear selection



Q24. A company is developing a real-time video processing application that requires GPU acceleration for tasks like object detection and tracking. They need a cloud service that supports GPU virtualization and can handle parallel processing efficiently. Which cloud service feature is essential for this scenario? 1 point

- ☒ a) GPU Virtual Machines
- ☐ b) GPU Scaling
- ☐ c) GPU Passthrough
- ☐ d) Distributed GPU

Clear selection

Q25. A machine learning team is developing a model that requires GPU acceleration for both training and inference. They want a cloud service that provides a unified environment for managing GPU resources throughout the entire machine learning lifecycle. Which cloud service feature would best meet their needs? 1 point

- ☐ a) GPU Monitoring and Management Tools
- ☒ b) GPU Orchestration Services
- ☐ c) GPU Lifecycle Management
- ☐ c) GPU Passthrough

Clear selection



Q26. Company XYZ is migrating its critical business applications to the cloud. They are concerned about protecting sensitive data and ensuring compliance with industry regulations. Which cloud service model would provide the highest level of control over security measures?

1 point

- ☒ a) Infrastructure as a Service (IaaS)
- ☐ b) Platform as a Service (PaaS)
- ☐ c) Software as a Service (SaaS)
- ☐ d) Artificial Intelligence as a Service (AIaaS)

Clear selection

Q27. An e-commerce platform is concerned about Distributed Denial of Service (DDoS) attacks that could disrupt its services. What cloud service provides a scalable solution to mitigate the impact of DDoS attacks?

1 point

- ☐ a) Amazon S3
- ☒ b) Cloudflare
- ☐ c) Google Cloud Storage
- ☐ d) CDN

Clear selection



Q28. A financial institution is adopting a cloud-based database for storing customer financial data. They want to ensure that their data is protected against unauthorized access, both in transit and at rest. Which encryption mechanism should they implement?

1 point

- ☒ a) SSL/TLS for data in transit, Transparent Data Encryption (TDE) for data at rest
- ☐ b) IPsec for data in transit, Two-Factor Authentication (2FA) for data at rest
- ☐ c) VPN for data in transit, OAuth for data at rest
- ☐ d) None of the above

[Clear selection](#)

Q29. An e-commerce company is using virtual machines to process and store customer payment information. They want to ensure that the data is encrypted both in transit and at rest. What measures should they take?

1 point

- ☒ a) Use SSL/TLS for data in transit, Enable Full Disk Encryption for data at rest
- ☐ b) Enable Virtual Private Network (VPN) for data in transit, Use Network Security Groups (NSGs) for data at rest
- ☐ c) Implement Multi-Factor Authentication (MFA) for data in transit, Use Virtual Machine Snapshots for data at rest
- ☐ d) IPsec for data in transit, Two-Factor Authentication (2FA) for data at rest

[Clear selection](#)

Q30. An e-commerce company is using virtualization to process the requirements of the tenants. What cloud pricing model allows organizations to pay for the actual resources they use, providing flexibility and cost efficiency?

1 point

- ☐ a) Subscription Pricing
- ☒ b) Pay-as-You-Go Pricing
- ☐ c) Reserved Instances
- ☐ d) Fixed Pricing

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