1. **What is the primary benefit of cloud computing over traditional on-premises infrastructure?**
   a) Higher upfront costs
   b) Scalability and flexibility
   c) Limited access to resources
   d) Reduced security

   Answer: b) Scalability and flexibility

2. **Which of the following is NOT a type of cloud deployment model?**
   a) Public cloud
   b) Private cloud
   c) Hybrid cloud
   d) Static cloud

   Answer: d) Static cloud

3. **What does "elasticity" mean in cloud computing?**
   a) The ability to scale resources up or down based on demand
   b) The ability to store data indefinitely
   c) The ability to run applications without an internet connection
   d) The ability to reduce costs permanently

Answer: a) The ability to scale resources up or down based on demand

4. **Which cloud service model provides virtualized computing resources over the internet?**
   a) SaaS
   b) PaaS
   c) IaaS
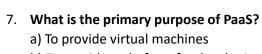   d) FaaS

   Answer: c) IaaS

5. **What is the main difference between public and private clouds?**
   a) Public clouds are free, while private clouds are paid.
   b) Public clouds are shared across organizations, while private clouds are dedicated to a single organization.
   c) Public clouds are less secure than private clouds.
   d) Public clouds are slower than private clouds.

   Answer: b) Public clouds are shared across organizations, while private clouds are dedicated to a single organization.

6. **Which of the following is an example of an IaaS provider?**
   a) Google App Engine
   b) Amazon EC2
   c) Microsoft Office 365
   d) Salesforce

   Answer: b) Amazon EC2

7. **What is the primary purpose of PaaS?**
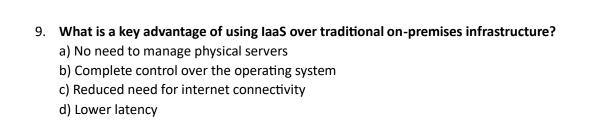   a) To provide virtual machines
   b) To provide a platform for developing, testing, and deploying applications
   c) To provide end-user applications
   d) To provide network infrastructure

   Answer: b) To provide a platform for developing, testing, and deploying applications

8. **Which Google Cloud product is a PaaS offering?**
    a) Google Compute Engine
    b) Google Kubernetes Engine
    c) Google App Engine
    d) Google Cloud Storage

Answer: c) Google App Engine

9. **What is a key advantage of using IaaS over traditional on-premises infrastructure?**
   a) No need to manage physical servers
   b) Complete control over the operating system
   c) Reduced need for internet connectivity
   d) Lower latency

   Answer: a) No need to manage physical servers

10. **Which of the following is NOT a characteristic of PaaS?**
    a) Automated scaling
    b) Managed infrastructure
    c) Full control over the underlying hardware
    d) Integrated development tools

    Answer: c) Full control over the underlying hardware

11. **What is the purpose of Google's global network?**
    a) To provide low-latency connectivity between data centers
    b) To reduce the cost of cloud services
    c) To increase the number of physical servers
    d) To provide free internet access

    Answer: a) To provide low-latency connectivity between data centers

12. **Which Google Cloud product provides a global load balancer?**
    a) Cloud CDN
    b) Cloud Interconnect
    c) Cloud Load Balancing
    d) Cloud DNS

Answer: c) Cloud Load Balancing

13. **What is the primary benefit of using Google Cloud's edge locations?**
    a) Reduced latency for end-users
    b) Increased storage capacity
    c) Lower costs for compute resources
    d) Improved security for data at rest

    Answer: a) Reduced latency for end-users

14. **Which of the following is a private connection between Google Cloud and an on-premises data center?**
a) Cloud VPN
b) Cloud Interconnect
c) Cloud CDN
d) Cloud DNS

Answer: b) Cloud Interconnect

15. **What is the purpose of Google Cloud CDN?**
    a) To provide secure connections between data centers
    b) To cache content closer to end-users for faster delivery
    c) To manage domain name resolutions
    d) To balance traffic across multiple regions

Answer: b) To cache content closer to end-users for faster delivery

16. **What is Google's commitment to environmental sustainability in its data centers?**
    a) Using 100% renewable energy
    b) Reducing the number of servers
    c) Increasing the use of fossil fuels
    d) Limiting access to cloud services

    Answer: a) Using 100% renewable energy

17. **How does Google Cloud reduce its carbon footprint?**
    a) By using energy-efficient hardware
    b) By increasing the number of data centers
    c) By reducing the use of renewable energy
    d) By limiting customer access

Answer: a) By using energy-efficient hardware

18. **What is the Carbon Sense suite in Google Cloud?**
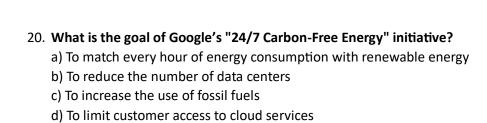   a) A tool to measure and reduce carbon emissions
    b) A tool to increase energy consumption
    c) A tool to manage compute resources
    d) A tool to monitor network traffic

Answer: a) A tool to measure and reduce carbon emissions

19. **Which of the following is a benefit of Google's commitment to sustainability?**
    a) Increased operational costs
    b) Reduced environmental impact
    c) Higher carbon emissions
    d) Limited scalability

Answer: b) Reduced environmental impact
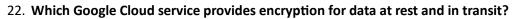
20. **What is the goal of Google's "24/7 Carbon-Free Energy" initiative?**
    a) To match every hour of energy consumption with renewable energy
    b) To reduce the number of data centers
    c) To increase the use of fossil fuels
    d) To limit customer access to cloud services

Answer: a) To match every hour of energy consumption with renewable energy

21. **What is the shared responsibility model in cloud security?**

a) Google is responsible for securing the infrastructure, and customers are responsible for securing their data.

b) Google is responsible for securing customer data, and customers are responsible for securing the infrastructure.

c) Both Google and customers are responsible for securing the infrastructure.

d) Neither Google nor customers are responsible for security.

Answer: a) Google is responsible for securing the infrastructure, and customers are responsible for securing their data.

22. **Which Google Cloud service provides encryption for data at rest and in transit?**
    a) Cloud IAM
    b) Cloud KMS
    c) Cloud Security Scanner
    d) Cloud Armor

Answer: b) Cloud KMS

23. **What is the purpose of Google Cloud IAM?**
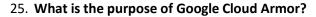   a) To manage access control and permissions
    b) To encrypt data at rest
    c) To monitor network traffic
    d) To provide DDoS protection

Answer: a) To manage access control and permissions

24. **Which of the following is a best practice for securing Google Cloud resources?**
    a) Using default passwords
    b) Enabling multi-factor authentication (MFA)
    c) Sharing credentials publicly
    d) Disabling logging and monitoring

Answer: b) Enabling multi-factor authentication (MFA)

25. **What is the purpose of Google Cloud Armor?**
    a) To provide DDoS protection and web application firewall (WAF)
    b) To manage encryption keys
    c) To monitor network traffic
    d) To provide identity and access management

Answer: a) To provide DDoS protection and web application firewall (WAF)

31. **What is the primary pricing model for Google Cloud Compute Engine?**
    a) Pay-as-you-go
    b) Fixed monthly fee
    c) Annual subscription
    d) Free for all users

    Answer: a) Pay-as-you-go

32. **What is the purpose of Google Cloud's sustained use discounts?**
    a) To reduce costs for long-running workloads
    b) To increase costs for short-term usage
    c) To provide free resources for new customers
    d) To limit access to cloud services

Answer: a) To reduce costs for long-running workloads

33. **Which of the following is a benefit of using committed use contracts?**
    a) Lower costs for predictable workloads
    b) Increased flexibility for short-term usage
    c) Higher costs for long-term usage
    d) Limited access to cloud services

    Answer: a) Lower costs for predictable workloads

34. **What is the purpose of Google Cloud's billing export feature?**
    a) To provide detailed usage and cost reports
    b) To increase costs for customers
    c) To limit access to cloud services
    d) To provide free resources

Answer: a) To provide detailed usage and cost reports

35. **Which of the following is NOT a factor in Google Cloud pricing?**
    a) Compute resources
    b) Storage usage
    c) Network egress
    d) Customer location

    Answer: d) Customer location

36. **What is the purpose of Google Cloud's Preemptible VMs?**
    a) To provide short-lived, low-cost instances
    b) To provide high-performance computing
    c) To provide dedicated hardware
    d) To provide free resources

Answer: a) To provide short-lived, low-cost instances