Q1:
Your company hosts a web application on EC2 instances. You want the application to be **secure from the internet**, but still allow it to fetch updates from external sources. What is the best setup?
A) Public subnet only
B) Private subnet with NAT Gateway
C) Public subnet with NAT Instance
D) VPC Endpoint only

Q2:
You have two VPCs: one for **development** and one for **production**. Developers need private access to production resources for testing. How can you achieve this?
A) VPN between VPCs
B) VPC Peering
C) Route 53 simple routing
D) CloudFront

Q3:
Your company has employees working from home who need access to internal AWS resources. You don't want to expose the resources publicly. Which AWS service should you use?
A) Site-to-Site VPN
B) Client VPN
C) Transit Gateway
D) ELB

Q4:
Your web application experiences sudden traffic spikes. You want to **distribute traffic automatically** and ensure no single server is overwhelmed. Which solution is best?
A) CloudFront
B) Elastic Load Balancer with Auto Scaling
C) VPC Peering
D) Direct Connect

Q5:
You operate a **global e-commerce site** and notice users in Asia are experiencing high latency when accessing your US-hosted servers. How can you improve performance?
A) Use Global Accelerator
B) Use a NAT Gateway
C) Enable Site-to-Site VPN
D) Launch VPC Peering

Q6:
Your company wants to serve **video content to millions of users worldwide**. The content is large, and you want fast delivery. Which AWS service is most suitable?
A) ELB
B) CloudFront
C) Route 53 Latency Routing
D) NAT Gateway

Q7:
You have a website with both **static content (images, HTML)** and **dynamic content (user-specific pages)**. You want to improve performance for users worldwide. What is the best approach?
A) CloudFront for static content + ELB for dynamic content
B) Only ELB
C) Only Route 53
D) Site-to-Site VPN

Q8:
Your company has deployed applications in **multiple AWS regions**. You want users to connect to the region with the **lowest latency automatically**. Which service and routing policy should you use?
A) Route 53 + Latency Routing
B) Route 53 + Weighted Routing
C) ELB + Auto Scaling
D) CloudFront + Geo-Restriction

Q9:
You want to ensure traffic is **redirected away from unhealthy servers automatically**. Which AWS feature helps?
A) Route 53 Health Checks
B) Security Groups
C) CloudFront Edge Locations
D) NAT Gateway

Q10:
A VPC hosts a **private database**. You want EC2 instances in that VPC to access **S3 securely without using the internet**. Which solution is best?
A) NAT Gateway
B) VPC Endpoint (PrivateLink)
C) Client VPN
D) Direct Connect

Q11:
Your company wants a database in AWS to **remain private**, but the application server must access it. Which setup is best?
A) Public subnet database + Internet Gateway
B) Private subnet database + Security Group allowing app server access
C) NAT Gateway only
D) CloudFront for database access

Q12:
You need to connect **two VPCs in different AWS accounts** privately. What should you use?
A) VPC Peering
B) ELB
C) Site-to-Site VPN
D) CloudFront

Q13:
Employees are working remotely and need **secure access to internal AWS applications**. Which service should you deploy?
A) Transit Gateway
B) Client VPN

C) NAT Gateway
D) VPC Peering

Q14:
Your global e-learning platform hosts videos. Students report **slow streaming** in Europe and Asia. Which service improves performance?
A) ELB
B) CloudFront
C) Site-to-Site VPN
D) NAT Gateway

Q15:
Your website has millions of users, and you want to **route traffic to the nearest healthy server automatically**. Which service should you use?
A) Global Accelerator
B) ELB
C) Route 53 Simple Routing
D) VPC Endpoint

Q16:
You operate an online shop. During sales, web traffic spikes significantly. You want to **ensure high availability and distribute traffic evenly across instances**. Which setup is best?
A) Single EC2 instance in a public subnet
B) Elastic Load Balancer + Auto Scaling across multiple AZs
C) NAT Gateway + CloudFront
D) Client VPN only

Q17:
You have applications deployed in **US East and EU West regions**. You want users to connect to the region with the **lowest latency**. Which service and policy should you use?
A) Route 53 + Latency Routing
B) Route 53 + Weighted Routing
C) ELB + health checks
D) CloudFront + geo-restriction

Q18:
You want to **automatically redirect users from unhealthy servers** to healthy ones. Which AWS feature is best?
A) ELB Health Checks
B) Route 53 Health Checks
C) Security Groups
D) VPC Flow Logs

Q19:
An application in a **private subnet** needs to access **S3 securely without internet exposure**. What is the recommended solution?
A) NAT Gateway
B) VPC Endpoint (PrivateLink)
C) CloudFront
D) Client VPN

Q20:
Your company has **multiple VPCs and on-premises networks**. You want a **central hub** to simplify connections and manage routing efficiently. Which service should you use?
A) VPC Peering
B) Transit Gateway
C) Client VPN
D) CloudFront

Q21: What is the purpose of a **VPC (Virtual Private Cloud)?**
A) Store files securely in the cloud
B) Create an isolated network environment in AWS
C) Distribute traffic across EC2 instances
D) Monitor user activity in AWS

Q22: Which AWS service acts as a **virtual firewall at the instance level**?
A) Network ACL
B) Security Group
C) Internet Gateway
D) NAT Gateway

Q23: A **subnet** is used to:
A) Connect two VPCs
B) Isolate and group resources within a VPC
C) Enable global content delivery
D) Monitor network traffic

Q24: What is the main function of a **Route Table** in a VPC?
A) Secure the instance
B) Control traffic flow between subnets and the internet
C) Store encrypted data
D) Accelerate global application traffic

Q25: Which AWS component **enables instances in a public subnet to access the internet**?
A) NAT Gateway
B) Internet Gateway
C) Security Group
D) Client VPN

Q26: Which of the following allows **instances in private subnets to access the internet** without exposing them?
A) Internet Gateway
B) NAT Gateway or NAT Instance
C) VPC Peering
D) Direct Connect

Q27: What is a **VPC Peering connection** used for?
A) Deliver content globally to users
B) Securely connect two VPCs to communicate privately
C) Connect remote employees to AWS
D) Encrypt traffic within a VPC

Q28: What is **AWS Direct Connect** used for?
A) Content delivery to users worldwide
B) Dedicated private network connection from on-premises to AWS
C) Load balancing traffic between EC2 instances
D) Encrypting data in S3

Q29: Which AWS service provides **a secure connection for individual remote users** to connect to a VPC?
A) Site-to-Site VPN
B) Client VPN
C) NAT Gateway
D) CloudFront

Q30: What is the difference between a **Network ACL** and a **Security Group**?
A) ACL = instance-level, SG = subnet-level
B) ACL = subnet-level, SG = instance-level
C) ACL = internet access, SG = private access only
D) ACL = CDN traffic, SG = VPN traffic

Q31 A company wants to map www.example.com to a single EC2 instance with no special routing logic. Which Route 53 routing policy should they use?

- A) Weighted
- B) Simple
- C) Latency-based
- D) Multi-value

Q32. A company wants to test a new version of its application by sending 20% of traffic to the new environment and 80% to the old one. Which routing policy should they choose?

- A) Failover
- B) Weighted
- C) Latency-based
- D) Geolocation

Q33. An e-commerce website has customers in the US and Asia. They want each user directed to the AWS Region with the lowest network latency. Which routing policy should be used?

- A) Simple
- B) Geolocation
- C) Latency-based
- D) Multi-value

Q34. A company needs a **disaster recovery setup**: traffic should normally go to the primary site, but if health checks fail, traffic should shift to a backup site. Which routing policy should they use?

- A) Failover
- B) Weighted
- C) Geolocation
- D) Multi-value

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1. Your company suspects unauthorized API calls were made to terminate some EC2 instances. Which service should you check to find **who made the calls**?
   A) CloudWatch Logs
   B) CloudTrail
   C) VPC Flow Logs
   D) GuardDuty

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2. You need to block a malicious IP address 203.0.113.25 from accessing **any resource in a subnet**. Security groups are not practical. What should you use?
   A) Add a deny rule in the subnet's NACL
   B) Remove the route to the internet gateway
   C) Use Route 53 to block DNS queries
   D) Enable AWS Config

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3. Developers accidentally opened port 22 (SSH) to the world on a security group. You want to **automatically detect and flag** this issue. Which service is best?
   A) AWS Config
   B) VPC Flow Logs
   C) CloudWatch Logs
   D) Trusted Advisor

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4. You want to monitor all **rejected connection attempts** made to EC2 instances in a private subnet. Which service should you use?
   A) CloudTrail
   B) VPC Flow Logs
   C) CloudWatch Metrics
   D) Global Accelerator

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5. Your application requires **millions of requests per second** with very low latency at Layer 4. Which load balancer should you choose?
   A) Application Load Balancer
   B) Network Load Balancer
   C) Classic Load Balancer
   D) CloudFront

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6. Your company hosts a web application on EC2. The servers should be **reachable over HTTP/HTTPS from the internet**, but SSH must be limited only to your office IP 197.45.88.10/32. Which security group setup is correct?
   A) Inbound 0.0.0.0/0 for all ports
   B) Inbound 0.0.0.0/0 for HTTP/HTTPS, 197.45.88.10/32 for SSH
   C) Inbound 0.0.0.0/0 for SSH, HTTP, HTTPS
   D) Inbound 197.45.88.10/32 for all ports

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7. Users in Asia complain of **high latency** when accessing your US-hosted application. Which AWS service reduces latency by routing traffic via the AWS global backbone network?
   A) Route 53 Simple Routing
   B) CloudFront
   C) Global Accelerator
   D) Transit Gateway

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8. You have a VPC with both public and private subnets. You want your **web servers accessible from the internet**, while your **databases stay private** but still communicate with the web servers. Which setup is correct?
   A) Deploy all resources in one large private subnet
   B) Deploy web servers in the public subnet and databases in the private subnet
   C) Deploy both web servers and databases in the public subnet
   D) Deploy databases in the public subnet but restrict with security groups

9. What is the difference between a **Network ACL** and a **Security Group**?
   A) ACL = instance-level, SG = subnet-level
   B) ACL = subnet-level, SG = instance-level
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