

## ❖ EASY (Q1–Q10)

**Q1.** pfSense is best described as a:

- A. Hardware router only
- B. Proprietary firewall OS
- C. Open-source firewall and router platform
- D. Antivirus solution

**Q2.** ClearOS is primarily used as:

- A. Desktop OS
- B. Network gateway and security platform
- C. Programming framework
- D. Database server

**Q3.** A reverse proxy primarily sits between:

- A. Client and client
- B. Server and database
- C. Client and backend servers
- D. Firewall and router

**Q4.** Which component is responsible for distributing client requests among servers?

- A. Firewall
- B. IDS
- C. Load balancer
- D. Proxy cache

**Q5.** Squid is commonly used as a:

- A. DNS server
- B. Web proxy and cache
- C. Mail server
- D. VPN server

**Q6.** Which UTM feature protects against malware?

- A. Load balancing
- B. Antivirus
- C. NAT
- D. QoS

**Q7.** Server farming refers to:

- A. Virtual machines only
- B. Cluster of servers providing same service
- C. Database replication
- D. Backup storage

**Q8.** Which protocol is commonly used by Nginx for reverse proxying web traffic?

- A. FTP

- B. SMTP
- C. HTTP/HTTPS
- D. SNMP

**Q9.** Which load balancing method sends traffic sequentially to servers?

- A. Least connections
- B. Hash-based
- C. Round robin
- D. Weighted random

**Q10.** UTM devices combine which type of security functions?

- A. Only firewall
  - B. Only IDS
  - C. Multiple security services in one appliance
  - D. Only antivirus
- 

## ❖ MEDIUM (Q11–Q25)

**Q11.** Why are Linux-based software firewalls popular in enterprises?

- A. Low performance
- B. High cost
- C. Flexibility and customization
- D. Limited features

**Q12.** Which pfSense feature enables VPN functionality?

- A. Squid package
- B. OpenVPN/IPsec integration
- C. DNS resolver
- D. Captive portal

**Q13.** In a reverse proxy setup, SSL termination occurs at:

- A. Client
- B. Backend server
- C. Reverse proxy
- D. Database server

**Q14.** Which Squid feature improves performance by reducing repeated web requests?

- A. ACL
- B. Authentication
- C. Caching
- D. Logging

**Q15.** Which UTM component detects intrusion attempts?

- A. Firewall only

- B. IDS/IPS
- C. NAT
- D. DHCP

**Q16.** Which load balancing technique directs traffic to the server with least active connections?

- A. Round robin
- B. Weighted round robin
- C. Least connections
- D. Random

**Q17.** Why reverse proxies improve security?

- A. Expose backend servers directly
- B. Hide internal server details
- C. Disable encryption
- D. Increase server count

**Q18.** Which UTM feature helps control web usage by categories?

- A. VPN
- B. Web filtering
- C. Load balancing
- D. Routing

**Q19.** In Nginx, URL-based routing is commonly implemented using:

- A. iptables rules
- B. Regular expressions in location blocks
- C. DNS records
- D. SSL certificates

**Q20.** Which factor primarily improves scalability in server farming?

- A. Single powerful server
- B. Horizontal scaling
- C. Strong encryption
- D. Logging

**Q21.** Which pfSense interface typically faces the internet?

- A. LAN
- B. DMZ
- C. WAN
- D. Loopback

**Q22.** Why UTMs are preferred by small and medium enterprises?

- A. Require multiple devices
- B. Lower management complexity
- C. Limited security
- D. High customization effort

**Q23.** Which Squid deployment type accelerates inbound web traffic?

- A. Forward proxy
- B. Transparent proxy
- C. Reverse proxy
- D. Bridge proxy

**Q24.** Which load balancing algorithm maintains session persistence?

- A. Round robin
- B. Least connections
- C. Source IP hash
- D. Random

**Q25.** Which Nginx feature helps distribute load among upstream servers?

- A. rewrite
  - B. upstream block
  - C. access\_log
  - D. error\_page
- 

## △ HARD (Q26–Q40)

**Q26.** Which scenario best justifies using a reverse proxy instead of a forward proxy?

- A. Monitoring employee browsing
- B. Protecting backend web servers
- C. DNS resolution
- D. Outbound traffic filtering

**Q27.** Why UTMs may struggle in high-throughput environments?

- A. Lack of routing
- B. Single device performing multiple inspections
- C. No IDS support
- D. No firewall capability

**Q28.** Which pfSense feature supports high availability?

- A. DHCP server
- B. CARP (Common Address Redundancy Protocol)
- C. Captive portal
- D. DNS forwarder

**Q29.** In server load balancing, what is “health check”?

- A. User authentication
- B. Server performance monitoring
- C. Detecting backend server availability
- D. Encryption verification

**Q30.** Which reverse proxy risk arises if misconfigured?

- A. Reduced performance only
- B. Backend server exposure
- C. Improved security
- D. Encrypted traffic loss

**Q31.** Which UTM inspection is most resource-intensive?

- A. Stateful firewalling
- B. Deep packet inspection
- C. NAT
- D. Routing

**Q32.** Why horizontal scaling is preferred over vertical scaling in server farms?

- A. Easier hardware replacement
- B. Lower fault tolerance
- C. Better resilience and scalability
- D. Increased latency

**Q33.** Which Nginx directive controls maximum concurrent connections?

- A. worker\_processes
- B. worker\_connections
- C. keepalive\_timeout
- D. sendfile

**Q34.** Which load balancing strategy is best for uneven server capacities?

- A. Simple round robin
- B. Least connections
- C. Weighted round robin
- D. Random

**Q35.** Why combining firewall and proxy in UTM improves security?

- A. Reduces encryption
- B. Multiple inspection layers
- C. Eliminates routing
- D. Simplifies attacks

**Q36.** Which Squid ACL feature restricts access based on time?

- A. src
- B. dstdomain
- C. time
- D. port

**Q37.** Which failure scenario is mitigated by server farming?

- A. Data corruption
- B. Single server crash

- C. Network sniffing
- D. Password theft

**Q38.** Why reverse proxy helps in DDoS mitigation?

- A. Encrypts traffic
- B. Acts as traffic buffer and filter
- C. Blocks all traffic
- D. Performs NAT only

**Q39.** Which pfSense package enables web proxy functionality?

- A. Snort
- B. Squid
- C. OpenVPN
- D. pfBlockerNG

**Q40.** Which architecture provides the highest availability for web services?

- A. Single server + firewall
- B. UTM only
- C. Load balancer + server farm + reverse proxy
- D. Proxy only