

## 📖 EASY (Q1–Q10)

**Q1.** Virtualization primarily allows:

- A. Running multiple OSs on a single physical machine
- B. Increasing CPU speed
- C. Replacing networking
- D. Eliminating storage

**Q2.** Which component manages virtual machines on a host?

- A. Guest OS
- B. Hypervisor
- C. Container runtime
- D. BIOS

**Q3.** Which is a Type-1 hypervisor?

- A. VirtualBox
- B. VMware Workstation
- C. KVM
- D. QEMU (user mode)

**Q4.** Which command lists running KVM virtual machines?

- A. virsh list
- B. virt-install
- C. virt-clone
- D. virt-manager

**Q5.** Which tool provides a GUI for KVM management?

- A. docker
- B. cockpit
- C. virt-manager
- D. ansible

**Q6.** Which file format is commonly used for VM disks?

- A. iso
- B. qcow2
- C. tar
- D. img.gz

**Q7.** Which network mode allows VM to share host IP?

- A. Bridged
- B. NAT
- C. Host-only
- D. Internal

**Q8.** Which network mode gives VM direct LAN access?

- A. NAT

- B. Host-only
- C. Bridged
- D. Internal

**Q9.** Which command starts a defined VM?

- A. virsh define
- B. virsh start
- C. virsh create
- D. virsh enable

**Q10.** Which service must be running for KVM management?

- A. httpd
- B. libvirtd
- C. sshd
- D. firewalld

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## ☐ **MEDIUM (Q11–Q25)**

**Q11.** Which command creates a new virtual machine from CLI?

- A. virsh
- B. virt-install
- C. virt-clone
- D. virt-top

**Q12.** Which KVM component provides hardware virtualization support?

- A. libvirt
- B. qemu-kvm
- C. virt-manager
- D. virsh

**Q13.** Which VM disk format supports snapshots?

- A. raw
- B. ext4
- C. qcow2
- D. iso

**Q14.** Which command displays VM resource usage?

- A. top
- B. virt-top
- C. virsh list
- D. free

**Q15.** Which network is created by default for KVM?

- A. Bridged

- B. NAT (virbr0)
- C. Host-only
- D. VLAN

**Q16.** Which file stores libvirt VM definitions?

- A. `/etc/libvirt/qemu/.xml`
- B. `/var/lib/kvm/.conf`
- C. `/etc/kvm/vm.conf`
- D. `/usr/libvirt/vms`

**Q17.** Which VM operation creates an identical copy?

- A. Snapshot
- B. Migration
- C. Clone
- D. Backup

**Q18.** Which feature saves VM state at a point in time?

- A. Clone
- B. Migration
- C. Snapshot
- D. Template

**Q19.** Which network device connects VMs to virtual networks?

- A. vNIC
- B. vSwitch
- C. Bridge
- D. Router

**Q20.** Which command gracefully shuts down a VM?

- A. `virsh destroy`
- B. `virsh stop`
- C. `virsh shutdown`
- D. `virsh halt`

**Q21.** Which VM network mode isolates VMs from external network?

- A. Bridged
- B. NAT
- C. Host-only
- D. Public

**Q22.** Which virtualization feature enables live migration?

- A. Snapshot
- B. Shared storage
- C. NAT networking
- D. Templates

**Q23.** Which file contains default NAT network configuration?

- A. /etc/libvirt/qemu/networks/default.xml
- B. /etc/sysconfig/network
- C. /etc/network/interfaces
- D. /etc/libvirt/default.conf

**Q24.** Which command edits VM XML configuration?

- A. virsh edit
- B. virt-install
- C. virt-manager
- D. virsh dump

**Q25.** Which VM network configuration improves security by isolation?

- A. Bridged
  - B. NAT
  - C. Host-only
  - D. VLAN-based networks
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## **HARD (Q26–Q40)**

**Q26.** Why is KVM considered a Type-1 hypervisor?

- A. Runs inside applications
- B. Integrated into Linux kernel
- C. Requires host OS GUI
- D. Uses containers

**Q27.** Which scenario best suits NAT networking?

- A. Public-facing servers
- B. Internal testing environments
- C. DMZ deployments
- D. High-performance clusters

**Q28.** Which virtualization risk occurs if host is compromised?

- A. Guest isolation
- B. VM escape
- C. Disk fragmentation
- D. Network latency

**Q29.** Which command migrates a running VM to another host?

- A. virsh clone
- B. virsh snapshot
- C. virsh migrate
- D. virsh move

**Q30.** Which configuration is required for live migration?

- A. Different CPU vendors
- B. Shared storage and compatible CPUs
- C. NAT networking only
- D. Disabled libvirt

**Q31.** Which network design supports multi-tenant isolation?

- A. Flat bridged network
- B. NAT
- C. VLAN/VXLAN
- D. Host-only

**Q32.** Which storage backend improves VM performance?

- A. qcow2 with snapshots
- B. Raw disk on SSD
- C. NFS over WAN
- D. Compressed images

**Q33.** Which VM security best practice reduces attack surface?

- A. Run all VMs as root
- B. Disable unused virtual hardware
- C. Enable all devices
- D. Share admin credentials

**Q34.** Which libvirt feature enforces resource limits?

- A. cgroups
- B. iptables
- C. SELinux only
- D. cron

**Q35.** Which VM networking issue causes IP conflicts?

- A. Duplicate MAC addresses
- B. NAT networking
- C. Host-only networks
- D. VLAN tagging

**Q36.** Which feature enables rapid VM provisioning?

- A. Snapshot restore
- B. Templates
- C. Live migration
- D. NAT

**Q37.** Which VM monitoring metric indicates CPU contention?

- A. Disk latency
- B. Memory free

- C. Steal time
- D. Network throughput

**Q38.** Which command permanently removes a VM definition?

- A. virsh destroy
- B. virsh shutdown
- C. virsh undefine
- D. virsh delete

**Q39.** Which best practice improves VM network security?

- A. Flat networks
- B. Disable firewall
- C. Network segmentation
- D. Shared IPs

**Q40.** Which principle best guides VM infrastructure design?

- A. Maximum density only
- B. Performance without security
- C. Balance of performance, security, and availability
- D. Minimal documentation