

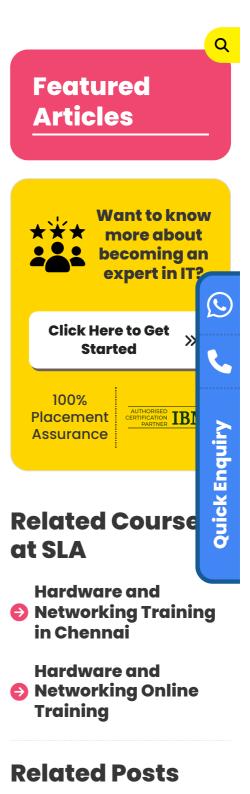


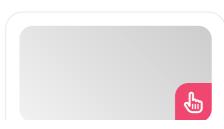
# Top 35 Hardware and Networking Interview Questions and Answers

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### Hardware and Networking Interview Questions and Answers

The learning of computer hardware and networking is considered a lucrative career as it is being used in most private and government organizations. Hardware and Networking are the in-demand skills and they are about dealing with various hardware components like chips, motherboard, RAM, computer systems, printers, external hard disks, and keyboards and networking elements such as modems, circuits boards, switches and routers, and cables. In the annual report presented to be the department of Electronics and Information Technology, the IT domain is growing up with





tremendous job opportunities and it is estimated at 10 million. Following are the frequently asked interview questions and answers and we hope this would help you in your technical rounds.

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# 1. What are the layers of the OSI reference model?

There are seven layers in the OSI model such as a physical layer, data link layer, network layer, transport layer, session layer, presentation layer, and application layer.

### 2. What are a node and links?

The devices at various endpoints located in a network at a different location are called nodes and the physical communication medium they using called links.

### 3. What is DNS?

There are two types of client/server programs: the first is used directly by the user like a mail and the second supports other application programs. The DNS (Domain Name System) is a supporting program used by other programs to find the IP address of an email recipient.

### 4. Differentiate domain and workgroup?

In the domain, a server is responsible for data security and it is centralized administration. The main goal of DNS is to secure data and it is the best suite for company environments. On the other hand, in the workgroup, every PC is responsible for their data and there will be no centralized administration. The main aim of this workgroup is to save hardware resources and it is best suitable for schools, training institutes, and cybercafé.

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Introduction Since MEAN Stack combines several other applications as part of its functionality, it is...



### Top 15 Struts Interview Questions and Answers

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Struts Interview Questions and Answers When it comes to developing Java web applications, Struts is...

(ii)

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C Sharp Interview Questions and Answers Microsoft created the general-purpose programming language C# together with...

Top 20 VB.Net

## 5. Define IP.

An Internet Protocol (IP Addresses) is a numerical label assigned to each device of a computer network that utilizes the Internet Protocol for communication and data transactions.

### 6. Define Layer?

The layer is a logical partition of the PDU (Protocol Data Unit) process and it defines how the information travels from one machine to another over the network connection.

### 7. What is Hub?

Hub is a layer 1 device that let out the signal from all of its port except the one from where it is inserted and it can't able to detect the collision. Hub works on a single collision and a single broadcast domain.

### 8. Define Switch.

The switch is a layer 2 device that maintains a CAM table to store the MAC address of devices connected to its port. CAM table is used to make the forwarding decision for the network and it works according to collision and single broadcast domain.

## 9. Define Client/Server

Clients and Servers are the two different logical entities that are connected together over a network to perform a task.

### 10. What is MAC Address?

MAC (Media Access Control) Address is the 48-bit hardware address of the LAN card and it is stored in ROM on the network adapter card with a unique identity.

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### 11. What are the required things to

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### configure the server?

The prerequisites for configuring a server are a LAN card that is in connection, a Root that should in NTFS (New Technology File System), and a Server that should be configured with a static IP address.

# 12. Define Proxy Server.

A proxy server is a server that all computers on the local network should pass this before accessing the information on the internet. Many organizations are using a proxy server to improve the network performance and filter the users to avoid unauthorized access to their information.

# 13. What are the bootable files of Windows 98 and Windows XP?

The bootable file for Windows 98 is command.com and for Windows XP, it is NTLDR (NT Loader).

# 14. What is the partition for Linux installation?

As Linux does not support a windows file system that follows a partition scheme, it will use its own file system called ext2 and ext3. Linux will be installed on the root position.

## 15. What is Sap?

The sap is the series of interface points that enable other computers to communicate with the layers of a network protocol stack.

### 16. Define subnet mask?

The subnet mask is a term that differentiates network address and host address in IP address. The value of 0 in a subnet mask defines host position in IP address and value 1-255 defines network address.

# 17. What is multicast routing?

The sending of group messages is known as multicast and the routing algorithm implemented

for this is multicast routing.

## 18. Define traffic shaping

The busiest traffic leads to congestion and if the hosts are made to transfer the data at a uniform rate, congestion will be less. It allows another loop open method to help manage congestion to send the packet to get transferred at a more predictable rate and this process is known as traffic shaping.

## 19. What is the region?

The routers will be divided into regions when the hierarchical routing is being used to reach the destination without knowing the internal structure of other regions.

### 20. What protocols will be used by DNS?

DNS utilizes UDP for communication between servers and for the improved speed it uses TCP for a connectionless protocol as transmission reliability is a risky one for UDP.

## <u>Hardware & Networking Engineer</u> <u>Salary</u>

# 21. What are the types of routing tables and explain their advantages?

There are three types of routing tables such as a fixed table, dynamic table, and fixed central table. A fixed table should be updated every time whenever it is changed, a dynamic table gets updated based on network traffic to reduce the amount of manual maintenance, and a fixed central table is reduced to only one table.

### 22. Define DNS resource record

DNS resource record is an entry in a name server's database and various types of resource records include name-to-address resolution information. Resource records will be maintained as ASCII files.

# 23. Why Hello protocol is being used?

The hello protocol uses time for replacing the distance to determine optimal routing and it is an alternative to the Routing Information Protocol.

### 24. What are the various network types?

LAN (Local Area Network), WAN (Wide Area Network), MAN (Metropolitan Area Network), CN (Content Network), and SAN (Storage Area Network).

### 25. What are the advantages of SAN?

The advantages of SAN are faster performance, high availability, redundancy features, spanned up distances, easy maintenance, low overhead, and thin protocol.

### 26. What is terminal emulation?

Telnet is also referred to as terminal emulation and it belongs to the application layer.

## 27. Define frame-relay?

Frame relay is a packet-switching technology and it will be operated in the data link layer.

## 28. What is Triple X in Networks?

The PAD (Packet Assembler Disassembler) is defined in a document known as X.3 and the standard protocol has been described between the terminal and the PAD known as X.28, and another protocol is between the PAD x.29. The recommendations of these descriptions are called Triple X.

## 29. Define Cladding

Cables with shield and typical fiber-optic that have a narrow stand of glass are known as cladding.

# 30. What is the command to check IP address without using network place?

The command for checking the IP address is Start à Run à Command à ipconfig.

### 31. What is the full form of CMOS?

The full form of CMOS is a Complementary Metal Oxide Semiconductor.

### 32. What is the Swap Size?

The hard disk space used like RAM for fast processing is the size of the swap. In Windows OS, it is known as virtual memory and it will be configured as per the retirement through this path: My Computer à Properties à Advance. In Linux, it is referred to as SWAP space and it takes the double size of physical RAM. If we have 256 MB, the DDR physical RAM swap will be 512 MB.

### 33. Define Attenuation

When the signal travels through a medium, it will lose its energy for the medium resistance efforts. This energy loss is called attenuation and it is the reason we feel the warmth when a wire carries electric signals. The amplifiers are being used to overcome this attenuation problem.

### 34. Define Distortion

When the signal travels through a medium from source to destination, it may change the form or shape of the signal and it is called distortion. It will be made up of various frequencies and each signal component has a unique progression to speed up through a traveling medium and the delay of reaching the final destination.

### 35. What is Noise and explain its types

The noise is the type of impairment of signal crossing and the various types of Noise are thermal noise, induced noise, crosstalk noise, and impulse noise. Thermal noise will be produced by the random motion of electrons in a wire, Induced noise comes from sources such as motors, crosstalk noise is the effect of a single wire on the other, and the impulse noise is produced from power lines and lightening.

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