1. **What is a networking?**

Ans – A computer networking is a set of computers. Computers on a network are called as nodes. The connection between computers can be done via cabling, most commonly the Ethernet cables or wirelessly through radio waves. Connected computers can share resources, like access to internet, printers, file servers and others. A network is a multipurpose connection, which allows a single computer to do more.

2. **What is the difference between router and switch?**

Ans – The differences between router and switch are as below,

Router	Switch
Router works on Network Layer (layer 3 of OSI model)	Switch works on Data Link Layer (layer 2 of OSI model)
Router is used to connect different networks.	Switch is used to connect computers or networking devices in a LAN
Router uses Packets.	Switch uses Frames.
Numbers of ports are less (i.e. port density is low) e.g. 2,4,5,8.	Numbers of ports are more (i.e. port density is high) e.g. 24, 48.
It is used in LAN, MAN and WAN.	It is used in LAN
In router, every port has its own broadcast domain.	Switch has one broadcast domain.
It uses IP address.	It uses MAC address.
Its manufacturers are Cisco, Netgear, Linksys, Asus, TP-Link, D-Link.	Its manufacturers are Cisco, D-Link and Juniper.

3. **How many collision domains are there in switch?**

Ans – As many ports are there in a switch that many collision domains are there. For example switch with 24 ports has 24 collision domains.

4. **How many broadcast domains are there in a switch?**

Ans – Only one broadcast domain is there in any switch.

5. **What is collision domain?**

Ans – A collision domain is, as name implies, a part of a network where packet collisions can occur. A collision occurs when two devices send a packet at the same time on the shared network segment.

6. **What is broadcast domain?**

Ans – A broadcast domain is a domain in which a broadcast is forwarded. A broadcast domain contains all devices that can reach each other at the data link layer (OSI layer 2) by using broadcast.

7. **What is Topology? What are the different types of topologies?**

Ans - A topology determines the physical arrangement of the devices in a network. Different types of topologies are bus, star, ring, partial mesh, full mesh, tree and hybrid topologies.

8. **Which topology is widely used?**

Ans – Star.

9. **What is a star topology?**

Ans – A star topology is a topology for a LAN in which all nodes (computers) are individually connected to a central point, like a hub or a switch. A star takes more cable than e.g. a bus, but the benefit is that a cable fails; only one node will be brought down.

10. **What is a bus topology?**

Ans – A bus topology is a topology for a LAN in which all nodes (computers) are connected to a coaxial cable in a liner method, the coaxial cable is also known as backbone or trunk which needs to be terminated at the both ends. If a backbone is broken, the entire segment fails.

11. What is cloud computing?

Ans – Cloud computing is a type of computing that relies on shared computing resources rather than having local servers or personal devices to handle applications.

In its most simple description, cloud computing is taking services and moving them outside an organization's firewall. Applications, storage and other services are accessed via the Web.

12. What is application?

Ans – An application is any program or group of programs that is designed for the end users. Application software include such as database programs, word processors, Web browsers and spreadsheets.

13. What is the difference between Operating System and Application Software?

Ans – An Operating System (OS) is system software that manages computer hardware and software and provides common services for Application Software. Application Software usually requires an Operating System to function.

14. What is the minimum hardware requirement to install Windows Server 2012?

Ans – The minimum hardware requirement to install Windows Server 2012 is as below,

A) Processor 1.4 GHz
B) Memory 1 GB
C) HDD 32 GB

15. What is the difference between CAT 5 and CAT 6 cables?

Ans –

CAT 5	CAT 6

It supports data transfers up to 100 Mbps in an Ethernet Networks.	It can go up to 10 Gbps in data transfer speeds in an Ethernet Network.
It's frequency is 100 MHz.	It's frequency is 250 MHz.
It is not able to tackle crosstalk issues due to its limitations.	It significantly reduces crosstalk issues due to protective shielding.

16. What is DNS server?

Ans – DNS stands for Domain Name System/Services/Server. It is used to resolve Hostname (computer name) to IP address and IP address to Hostname. For example when you send an email to info@jetking.com then, DNS is very important to locate the "jetking.com" domain and deliver the mail.

17. What is the forward DNS lookup and reverse DNS lookup?

Ans – Forward DNS lookup is used to convert the human meaningful name (domain name) which is easy to understand format to computer meaningful name (IP address), however Reverse DNS lookup works in reverse way to convert IP address to domain name.

18. Which protocols are used while configuring outlook?

Ans – For sending mails i.e. outgoing or uploading, we use SMTP (Simple Mail Transfer Protocol) and for receiving mails i.e. incoming or downloading, we use either POP (Post Office Protocol) or IMAP (Internet Message Access Protocol).

19. What is the difference between POP and IMAP?

Ans –

POP	IMAP
Have to download all messages at once.	Can view just message headers and then choose which messages to download.
Must download all messages.	Delete or move a message without having to download it.
Must download entire message,	Download only the body of a message.

including attachments.	

20. What is the difference between teamviewer and remote desktop?

Ans –

TEAMVIEWER	REMOTE DESKTOP
TeamViewer allows the remote user to see everything you to on their screen, which is important for providing remote support to your customers.	Remote Desktop Protocol (RDP) dose not allow the user of the remote computer to see or control their screen when you connect to them, meaning the remote user doesn't know what you are doing on their computer.
TeamViewer works without port forwarding or other firewall configurations.	RDP requires you to configure port forwarding on the remote computer's firewall or router.

21. What is the difference between straight and cross cables?

Ans – Straight cable is used to connect different types of networking devices e.g. switch to router while cross cable is used to connect similar types of devices e.g. router to router.

22. What is VLAN?

Ans – A Virtual Area Network (VLAN) is a grouping of network nodes such as computers, network devices and servers that are connected in a logical manner. VLAN allows computers and users to communicate in a simulated (virtual) environment as though they exist in the same physical LAN segment and share a single broadcast domain. VLAN provides scalability, ease of network management and security in a switched network.

23. What is the difference between POP3 and SMTP?

Ans –

POP3	SMTP

POP3 (Post Office Protocol version 3) is used to download mails.	SMTP (Simple Mail Transfer Protocol) is used to send mails.
By default port number is 110	By default port number is 25

24. What is the function of router?

Ans – A router is a network layer device which operates at the network layer of OSI model. It is used to connect two or more different networks and different geographical locations. Router is a networking device that forwards data packets between computer networks. Routers perform the traffic directing functions on the Internet.

25. How to secure wireless network?

Ans – The following practices can secure your wireless network,

A) Keep unrecognizable SSID.
B) Use Enterprise WPA2 authentication.
C) Use complicated password for wireless users.

26. What is WPA?

Ans - Wi-Fi Protected Access (WPA) is a security standard for users of computing devices equipped with wireless internet connections. It provides more sophisticated data encryption and better user authentication than Wired Equivalent Privacy (WEP), original Wi-Fi security standard. There are 2 types of WPA, WPA and WPA2. WPA2 is advanced and more secured compared to WPA.

27. What is Wi-Fi?

Ans – Wi-Fi is the technology for radio wireless local area networking devices based on IEEE 802.11 standards. Devices that can use Wi-Fi technologies include desktops, laptops, smart phones and tablets, smart TVs, digital audio players and modern printers. Wi-Fi compatible devices can connect to the internet via wireless LAN or wireless access point. Such an access point has range of about 20 meters (66 feet).

28. How to set secure password to access your computer or network?

Ans – Your password should meet the following criteria to be complex and more secure,

A) It should be non-dictionary word.
B) It should be the combination of upper case (capital letters), lower case (small letters), numbers and special characters.

29. How to troubleshoot pc remotely?

Ans – We can troubleshoot pc remotely by using in built remote desktop connection or third party softwares like anydesk, temviewer, showmypc, ammy admin etc.

30. What is the disk management?

Ans – Disk Management is an extension of the Microsoft Management Console (MMC) that allows full management of the disk-based hardware recognized by Windows.

Disk Management is used to manage the drives installed in a computer – like hard drives (internal and external), optical disk drives and flash drives. It can be used to partition drives, format drives, assign drive letters and much more.

31. What is .pst?

Ans – A PST file, or Personal Storage Table (.pst) file, is a Microsoft Outlook Data File that stores a user's outlook data for POP3, IMAP and web-based email accounts, including all mail folders and the items within the folders, such as email attachments, to do items appointments, contacts and more.

32. What is .ost?

Ans – An OST file (.ost) is an offline folder file in Microsoft Outlook. Offline folders make it possible for the user to work offline and then to synchronize changes with the Exchange server the next time they connect. The ability to work offline is useful in environment with limited or unreliable connectivity.

33.What is difference between .pst and .ost?

Ans –

OST flie	PST file
OST stands for Offline Storage Table	PST stands for Personal Storage Table
OST is offline storage folder	PST is online storage folder
OST files only support Microsoft Exchange Server	PST files can be used with Exchange setup but not recommended. Apart from Exchange server, it is also compatible with other servers.
OST files enable users the options to read, view, reply and compose emails even in offline mode.	PST files don't have this facility.

34. What is MS Outlook?

Ans – Microsoft Outlook is offline mail client. It is a personal information manager from Microsoft, available as a part of the Microsoft Office suite. Although often used mainly as an email application, it also includes a calendar, task manager, contact manager, note taking, journal and web browsing.

35. What is a domain?

Ans – A domain is a group of users, workstations, devices, printers, computers and database servers that are administered as a unit with common rules and procedures. Domains are defined by the IP address. All devices sharing a common part of IP address are said to be in the same domain.

36. What is static IP address and dynamic IP address?

Ans – Static ip address is given to the device manually and does not change. Dynamic ip address is obtained from DHCP server and this may get changed. In the absence of DHCHP server operating system gives ip address through APIPA (Automatic Private IP Address) range is from 169.254.0.1 to 169.254.255.254.

37. What is latest version of internet explorer?

Ans – Internet Explorer version 11.

38. What is protocol?

Ans – In IT, a protocol is the special set of rules that end points in a telecommunication connection use when they communicate. Protocols specify interactions between the communicating devices.

39. What is subnetting?

Ans – Subnetting is the practice of dividing network into two or more smaller networks. It increases routing efficiency, enhances the security of the network and reduces the size of the broadcast domain.

40. What is the difference between shared printer and network printer?

Ans – Shared printer is physically connected to the one of the computer in the network while network printer is connected to the networking device like switch. Shared printer can't be accessed when connected pc is turned off whereas network printer is always available.

41. What is print spooler service?

Ans – A software program responsible for managing all print jobs currently is being sent to the computer printer or print server. The print spooler program may allow a user to delete a print job being processed or otherwise manage the print jobs currently waiting to be printed.

42. What is the difference between 32 bit os and 64 bit os?

Ans – The terms 32-bit and 64-bit refer to the way a computer's processor, handles information. The 64-bit version of Windows handles large amount of RAM more effectively than 32-bit system. Using 64-bit one can do a lot in multitasking, user can easily switch between various applications without any windows hanging problem.

43. What is archive feature in the outlook?

Ans – Heavy outlook pst data file size or old items in Microsoft Outlook makes it slower and archiving email in outlook helps to overcome from such issues. Archiving means saving or backing up the old items of outlook such as messages, contacts, tasks, calendars and other outlook database.

44. What is open source operating system?

Ans – It means users are allowed to obtain and view possibly alter the source code for the operating system kernel and its associated programs. In other words, it is not a secret and you do not have to pay a license fee and sign a Non-Disclosure Agreement (NDA) to work with or look at the source code. Some popular open source operating systems are Ubuntu, Linux Lite, Fedora, Linux Mint, Solus, Xubuntu, Chrome OS, and React OS etc.

45. What are the different versions (editions) of windows 7?

Ans –

A) Windows 7 Starter
B) Windows 7 Home Basic
C) Windows 7 Home Premium
D) Windows 7 Professional
E) Windows 7 Enterprise
F) Windows 7 Ultimate

46. What is the Active Directory?

Ans – Active Directory (AD) is the directory service that Microsoft developed for Windows domain networks. It is included in most Windows Server operating systems as a set of processes and services. A server running Active Directory Domain Services (AD DS) is called a domain controller. It authenticates and authorizes all users and computers in a Windows domain type network – assigning and enforcing security policies for all computers and installing or updating software.

47. What is the Shadow Copy?

Ans – Shadow copy is a technology included in Microsoft Windows that allows taking manual or automatic backup copies or snapshots of computer files or volumes, even when they are in use.

48. What is the difference between domain and workgroup?

Ans –

DOMAIN	WORKGROUP
One or more computers are servers and remaining are clients.	All computers are peers.
If you have a user account on the domain, you can logon to any computer on the domain.	Each computer has set of accounts which can logon on local computer only.
There can be 100 plus computers in the domain.	Typically not more than 20-30 computers in the workgroup.

49. What is TCP/IP?

Ans – TCP/IP or Transmission Control Protocol/Internet Protocol is a suite of communication protocols used to interconnect network devices on the internet. TCP/IP can also be used as a communication protocol in a private network (an intranet or extranet).

50. What is firmware?

Ans – Firmware is programming that's written to a hardware device's non-volatile memory. Firmware, which is added at the time of manufacturing, is used to run user programs on the device and can be thought of as the software that allows hardware to run.

51. What is the parallel port?

Ans – A parallel port is an interface allowing a personal computer to transmit or receive data to a peripheral device such as printer.

52. What is USB?

Ans – USB (Universal Serial Bus) is an industry standard that establishes specifications for cables, connectors and protocols for connection, communication and power supply between pc and their peripheral devices.

53. What are the different versions of USB?

Ans –

USB versions	Data Transfer Speed
USB 1.0	12 Mbps
USB 1.1	12 Mbps
USB 2.0	480 Mbps
USB 3.0	5000 Mbps (5 Gbps)

54. What is the difference between SATA and PATA (IDE)?

Ans –

SATA	PATA
Full form is Serial Advanced Technology Attachment.	Full form is Parallel Advanced Technology Attachment.
Speed is 150 Mbps for SATA 1, 300 Mbps for SATA 2 and 600 Mbps for SATA 3.	Speed is 100/133 Mbps.
Number of pins of data cable is 7.	Number of pins of data cable is 40.
Number of pins of power cable is 15.	Number of pins of power cable is 4.

55. What is over clocking? What are the advantages of over clocking?

Ans – It is a process where the computer component is forced to run at a higher clock rate. The advantages of the over clocking are as below,

A) Increases the CPU's performance.
B) It is cost saving.
C) Makes pc games and applications to run faster.

56. What is heat sink and what is the use in the system?

Ans – To lower the temperature of the device, heat sink component is used. It is there on the microprocessor and if it is not functioning well then the computer will shut down automatically.

57. What is the jumper and why do you need it?

Ans – Jumper is the metal bridge that closes an electric circuit. A jumper consists of a plastic plug that fits over a pair of pins. It is used to change board's parameters.

58. What do you use to connect two computers without using switch?

Ans – Cross cables are used to connect two computers without using switch.

59. What is RAID?

Ans – RAID (Redundant Array of Independent/Inexpensive Disks) is a way of storing the same data in different places on multiple hard disks to protect data in the case of a drive failure. However, not all RAID levels provide redundancy.

60. What is RAID level 0?

Ans – The configuration has striping, but no redundancy of data. It offers the best performance, but no fault-tolerance.

61. What is RAID level 1?

Ans – RAID level 1 is also known as disk mirroring, this configuration consists of at least two disks. There is no striping. In case of failure of one disk, data can be retrieved from other disk means there is fault tolerance.

62. What is RAID level 5?

Ans – RAID level 5 requires minimum 3 disks. There is fault tolerance.

63. What is VPN server?

Ans – VPN stands for Virtual Private Network. It is basically used for mobile users in the network. This server provides the remote access connectivity for mobile users. In this way all of the mobile users are connected to the server through internet. This server also provides the connectivity between two or more office in the network. VPN is cost effective.

64. What is NAT?

Ans – Network Address Translation (NAT) is the process where a network device, usually a firewall or router, assigns a public ip address to a computer (or a group of computers) inside a private network. The main use of NAT is to limit the number of public ip addresses an organization or company must use, for both economy and security purposes.

65. What is the purpose of BOOT.INI?

Ans – Boot.ini is used to decide which operating system options are displayed during the start-up process.

66. What is the difference between hub and switch?

Ans – A hub sends network traffic to all the ports that it is connected to. A switch sends traffic only to a particular port it is set for.

67. What is a default gateway?

Ans – A default gateway is the IP address of the router in the network. In any case, if the users want to switch on to another network, or if they cannot locate their particular network then the query will be forwarded to default gateway.

68.How to resolve no print issue?

Ans – The following steps are needed to perform no print issue,

A) Take test print from printer properties.
B) Check whether USB cable is connected properly or not.
C) Shuffle USB cable

D) Still print is not there; take self test from printer by pressing button from control panel of printer.
E) Need to check whether cartridge is inserted properly or printer door is closed properly.
F) If print is there in self test, we need to reinstall printer drivers.
G) If print is not there while taking self test, we need to log call for printer engineer.

69. What is the server?

Ans – In computing, a server is a computer program or a device that provides functionality for other programs or devices, called "clients". This architecture is called the client-server model, and a single overall computation is distributed across multiple processes or devices. Typically servers are database servers, file servers, mail servers, print servers, web servers and application servers.

70. What is migration?

Ans – PC Migration is the process of transferring the entire user environment (e.g. personal documents and settings) between two computers.

71. How to resolve no internet issue?

Ans – The following steps can be performed to resolve no internet issue,

A) Check whether LAN cable is connected properly or not.
B) Check your computer's IP address is configured properly.
C) Ping to the gateway address of your PC to ensure your pc is in LAN.
D) Ping to DNS or public DNS i.e. 8.8.8.8 to ensure your ISP is working or not.
E) If you are not able to ping DNS, reboot your ISP hardware device (e.g. router or modem).
F) After reboot also internet is not there, you need to connect to ISP with the help of a single pc. Either you need to set IP on obtain ip address automatically or may configure public IP address to the pc to check whether internet is there or not.
G) If still internet is not there, you need to contact your ISP and log the call.

72. What are the basic troubleshooting steps for no print issue?

Ans – The following steps are performed to resolve no print issue,

A) Give Test Print
B) Check whether printer cable (USB cable) connected properly or not.
C) Take self test.

73. What is a processor?

Ans- A processor is the main component of the computer which accepts the instructions from the input devices, process on that instruction and sends the output to the output devices.

74. Which are the latest processors of Intel?

Ans- core i9 is the latest processor of Intel.

75. What are the specifications of the processor?

Ans -

A. Make – Manufacturer e.g. Intel or AMD
B. Clock Speed - In Gigahertz (GHz)
C. Cache Size – In MB
D. FSB - In Megahertz (MHz)

76. What is cache memory?

Ans- Cache memory is a small and fast memory which is placed between Processor and RAM. Cache memory stores the instruction from the RAM so that processor does not have to traverse RAM to get the instruction.

77. What are EDB, EIST, Turbo Boost, Hyper-Threading, Smart Cache and virtualization?

Ans - EDB- Execute Disable Bit is an Intel Hardware based security feature that help to secure computer from viruses and malicious.
EIST- Enhanced Intel Speed Step Technology allows the system to dynamically adjust processor voltage and frequency according to requirement.
Turbo Boost- It is new feature of Intel latest processors which automatically allows processor cores to run faster than the base operating frequency.

Hyper Threading- Hyper threading enables a single processor to work as logically 2 processors. It was launched with Pentium-4 Processor.
Smart Cache- Smart Cache allows each core of processor to dynamically utilize up to 100% of available cache memory.
Virtualization- It is a technology used to run multiple virtual machines on a single physical machine.

78.What are FSB, DMI and QPI?

Ans - FSB- Front Side Bus connects Microprocessor to RAM through North Bridge.

DMI- Direct Memory Interface is a feature of computer systems that allows certain hardware subsystems to **access** main system **memory** (RAM) independently of the central processing unit (CPU).

QPI- Quick Path Interconnect (**QPI**) is a point-to-point processor **interconnects** developed by Intel which replaced the front-side bus (FSB).

79.What is the bus speed?

Ans – The rate of communication speed between microprocessor and RAM is known as bus speed.

80. What is the RAM?

Ans – RAM (Random Access Memory) is the hardware in a computer where the Operating System (OS), application programs and data in current use are kept so they can be quickly reached by the processor.

81.What is the Difference between Volatile and Non-Volatile Memory?

Ans - Volatile memory is temporarily storage and can store data until it is receiving power whereas Non Volatile stores data permanently even after turning off the power.

82.What is SRAM?

Ans - Static Random Access Memory is a volatile memory that retains data bits in its memory and does not have to periodically refreshed. **Cache memory** is the example of SRAM.

83.What is DRAM?

Ans - Dynamic Random Access Memory is a volatile memory that stores data bits in cells and have to periodically refreshed. **System Memory** is the example of DRAM.

84.What are the differences among DDR1, 2, 3 and 4 RAM?

Ans -

RAM	Total Pins	Frequency Range	Operating Voltage
DDR-1	184	266-400 MHz	2.5 Volt
DDR-2	240	533-800 MHz	1.8 Volt
DDR-3	240	1066-1866 MHz	1.5 Volt
DDR-4	288	2133-4266 MHz	1.2 Volt

85.What is ROM?

Ans - Read Only Memory (ROM) is non-volatile memory which stores data permanently. The data in ROM can only be read but can't be modified.

86.What are the types of ROM?

Ans - The type of ROM are **PROM** (Programmable Read-Only Memory)**, EPROM** (Erasable Programmable Read Only Memory) **and EEPROM** (Electrically Erasable Programmable Read Only Memory)**.**

87.What is a flash memory?

Ans – Flash memory is an electronic (solid-state) non-volatile computer storage medium that can be electrically erased and reprogrammed.

88.What are the specifications of RAM?

Ans – A) Make - (manufacturers) e.g. Hynix, Transcend, Kingston, Samsung etc.
B) Type – e.g. DDR1, DDR2 and DDR3
C) Capacity – in GB
D) Speed (frequency) – in MHz

89.What is the difference between RAM and ROM?

Ans – RAM stands for Random Access Memory. It is used for the temporary storage of data that is being worked on. ROM is Read Only Memory and is used for permanent storage of data that should never be changed, like BIOS for example.

90.What is the Motherboard?

Ans – A motherboard is the main printed circuit board (PCB) in a computer. The motherboard is a computer's central communications backbone connectivity point, through which all components and external peripherals connect.

91.What is North Bridge?

Ans - North Bridge- Northbridge controls is an IC (Integrated Circuit) on motherboard that performs the interaction of processor with the System Memory (RAM).

92.What is South Bridge?

Ans – **South Bridge** – South Bridge is an IC (Integrated Circuit) on motherboard that performs the interaction of processor with Input/output Controllers and Expansion slot such as PCI and AGP slots.

93.What is ICH?

Ans - **ICH-** Input/output Controller Hub is an Intel microchip which is used to connect and control peripheral devices.

94.What is Super I/O Chip?

Ans - Super I/O chip is a single chip which controls slower I/O devices which are not controlled by South Bridge.

95.Define PCI?

Ans - PCI- **Peripheral Component Interconnect** is a 32-bit wide bus which is used to attach expansion card on the motherboard such as LAN Card, Sound Card and Internal Modem.

96.Define AGP?

Ans - **AGP**- Accelerated Graphics Port is dedicated to attach graphics card on the motherboard.

97.What is a jumper?

Ans – Jumper allows a computer to close an electrical circuit, allowing the electricity to flow certain sections of the circuit board. Jumpers are used to configure the settings of computer peripherals such as the motherboard, hard drive, modems, sound cards and other components.

98.What is POST?

Ans – POST (Power On Self Test) is a routine process that is executed immediately once the system is powered on. It is only after POST that a system allows the bootstrap loader to be initialized. The POST is performed to ensure that the system peripherals are connected and functioning and there are no compatibility issues.

99. Name the motherboard manufacturing companies?

Ans – A) Asus
B) Intel
C) MSI
D) Gigabyte

100. How much voltage is given to motherboard?

Ans – +12 V DC

101. What is the voltage of CMOS battery?

Ans – 3.3 V DC

102. What is SMPS?

Ans - Switch Mode Power Supply provides the regulated DC voltage to all the component of a computer.

103. What are the Output Voltages of power supply?

Ans –

Wire Color	Voltage	Use For
Blue	-12V	Provides power to serial ports.
White	-5V	Provides power to floppy controllers and ISA slots.
Black	0V	It is used for grounding.
Orange	+3.3V	Provides power to processor, Expansion slots and DIMM slots.
Red	+5V	Provides power to Logic cards and SIMM slots.
Yellow	+12V	Provides power to the motors.

104. What are the power supply control Signals?

Ans –

A) **PG Signal (Power Good) (Gray +5V) -** It indicates that all output voltages (+12V, -12V, +5V, -5V, 3.3V) are at proper level.
B) **PS_ON Signal (Power Supply On) (Green +5V) -** It is used to power on and power off the SMPS unit.
C) **SB (Standby Signal) (Violet +5V) –** Supplies line that is used to power standby circuitry, such as the PS_ON circuit and the wake-on-LAN. The +5VSB line is a +5 volt supply. It is always on when the AC power input is active, even if the system is turned off.

105. How to check power supply?

Ans - If the SMPS fan is working fine after shorting the PS_ON signal (Green) with any Ground (Black), initially the SMPS is working fine.

106. What is Hard Disk?

Ans - A hard disk is the primary permanent storage device which hosts the operating system as well as data.

107. What are the different types of HDD?

Ans –

HDD Type	Transfer Rate	Pins
ATA-6	100 MB/Sec	40/80
ATA-7	133 MB/Sec	80 Pins
SATA 1.5	150 MB/Sec	7
SATA 3.0	300 MB/Sec	7
SATA 6.0	600 MB/Sec	7
USB 2.0	60 MB/Sec	4
USB 3.0	625 MB/Sec	4

108. What are the different types of hard disk?

Ans – A) IDE (Integrated Drive Electronics)/ PATA (Parallel Advanced Technology Attachment)

B) SATA (Serial Advanced Technology Attachment)

C) SSD (Solid State Drive)

D) SCSI (Small Computer System Interface**)**

E) USB

109. What is RPM? What are different RPM in HDD?

Ans - Revolution Per Minute defines that how many times the platter of the drive completes 360^0 turn in one minute. Faster RPM means better read write performance of the drive. Different RPM of the hard drives are 5400, 5900, 7200 and 10000.

110. What are the specifications of HDD?

Ans – A) Make (Manufacturer)

B) Type (SATA or IDE)

C) Size (in GB/TB)

D) RPM (Revolution Per Minute)

111. What is the difference between SATA and SSD hard disk?

Ans -

Sr. No.	SATA	SSD
1.	Storage capacity is up to 10 TB	Storage capacity is up to 4 TB
2.	Noise is there due to moving parts	Noise is not there due to no moving parts

3.	Data accessing rate is slower compared to SSD	Data accessing rate is faster compared to SATA
4.	Less expensive	More expensive

112. What is the difference between CD and DVD?

Ans –

CD	DVD
Full form is Compact Disk	Full form is Digital Versatile Disc
Capacity is 700 MB	Capacity is 4.7 GB

113. What are the different types of Monitors?

Ans – The different types of monitor are CRT, TFT, LCD, LED and plasma.

114. What is Pixel?

Ans – Pixels are the tiny dots (.) on the screen. The more number of pixels means the more clarity.

115. What is the printer?

Ans – Printer is an output device which converts soft copy into hard copy.

116. What are the types of printer?

Ans – There are two types of printers

A) Impact Printers: - These are the printers where a physical contact is established between the paper and the print head Dot matrix printer is a type of Impact Printers.
B) Non-impact Printers: - These are the printers where a physical contact is not established between the paper and the print head. Inkjet and Laser are the types of Non-impact Printers.

117. How many pins are there in the head of Dot Matrix Printer?

Ans – There are 9 to 24 pins in the head of Dot Matrix Printer.

118. What is scanner?

Ans – Scanner is an input device which converts a hard copy into soft copy.

119. What are the types of scanner?

Ans – The types of scanners are as below,

A) Flatbed scanner
B) Sheet Fed scanner
C) Slide scanner
D) Drum scanner

120. What is BIOS?

Ans – BIOS (Basic Input Output System) is a program or firmware which is loaded in CMOS chip located on the motherboard. It performs the basic maintenance of the system by checking all the hardware connected to the system and loads the operating system.

121. What is the POST?

Ans – When the power is turned on, POST (Power On Self Test) is the diagnostic testing sequence that a computer's basic input/output system (or "starting program") runs to determine if the computer keyboard, RAM, disk drives and other hardware are working correctly.

122. What are the minimum 5 hardware components required to get display?

Ans – The minimum 5 hardware component required to get display are,

A) Processor
B) Motherboard
C) RAM
D) SMPS
E) Monitor

123. How to resolve no display issue?

Ans – The following steps are there to resolve no display issue,

A) Check VGA cable, connectors and ports whether they are loose or damaged.
B) Check whether RAM is installed properly or not, remove it erase and install.
C) Still no display install RAM in other slot.
D) Shuffle RAM with working PC.
E) Troubleshoot processor by taking out motherboard from the cabinet and remove heat sink fan. Now short motherboard and touch processor. If it's heating then processor is working.
F) If processor is working, need to send motherboard to the service center for repairing.

124. How to resolve no boot issue?

Ans – The following steps are there to resolve no boot issue,

A) Check power and power cable by shuffling socket and power cord.
B) Troubleshoot SMPS by shorting BLACK and GREEN wires.
C) Change JUMPER setting on the motherboard.
D) Take out motherboard from cabinet and connect all five components (Processor, Motherboard, RAM, SMPS and Monitor).
E) Still display is not there; need to send motherboard to the service center for repairing.

125. How to reset BIOS by using CMOS battery?

Ans – The following steps are there to reset BIOS by using CMOS battery,

A) Turn off PC and disconnect cabinet's power cord from power socket.
B) By opening cabinet remove CMOS battery from motherboard. Connect power cord and start the PC.

C) Now again turn off PC install CMOS battery connect power cord and turn on PC.

126. How to reset BIOS through JUMPER settings?

Ans – The jumper has two settings, one is normal (1 & 2 pins) other is clear CMOS (2 & 3 pins). We need to turn off PC and by disconnecting power cord set to 2 & 3 to clear CMOS settings. Now again turn off PC set to 1 & 2 pin and turn of PC.

127. What is basic hardware requirement to install Windows 7, 8, 10?

Ans - Processor – 1 GHz

RAM - 1 GB

HDD - 16 GB

128. What is operating system?

Ans – An operating system (OS) is system software that manages computer hardware and software and software, it acts an intermediate between user and hardware.

129. What is client Operating System? Name some client OS?

Ans – The client operating system is the system that works within desktop computers and various portable devices. Windows 98, Windows 2000 Professional, Windows-XP, Windows Vista, Windows 7, Windows 8 and Windows 10 are the client operating systems of Microsoft.

130. What is server operating system? Name some server OS?

Ans: An operating system which can be provided network services is known as Server operating system. Windows NT, Windows 2000 Advanced Server, Windows Server 2003, Windows Server 2008 and Windows Server 2012 are the server operating system of Microsoft.

131. What are the editions of Windows 10?

Ans –

A) Windows 10 Home
B) Windows 10 Pro
C) Windows 10 Enterprise
D) Windows 10 Education

132. What is Dual Boot?

Ans – Dual boot system is a computer system in which two operating systems are installed on the same hard drive, allowing either operating system to be loaded and given control. When you turn the computer on, a boot manager program displays a menu, allowing you to choose the operating system you wish to use.

133. What is the Bitlocker?

Ans – Bitlocker is the full disk encryption feature included with selected editions of Windows Vista and later. It is designed to protect data by providing encryption for entire volume.

134. What is Bitlocker To Go?

Ans – Bitlocker To Go allows you to protect data stored on USB storage devices.

135. What is Parental Control?

Ans – Parental Control is designed to help protect children on computer by monitoring their usage, setting time limits and restrictions and filtering the web pages you want them to see.

136. Which are the by default user accounts in Windows 10?

Ans – Administrator and Guest.

137. What is quota?

Ans – Quota is used to specify storage limit on a drive for the users.

138. What are Windows Updates?

Ans – The Windows Update utility is used to keep your Windows-based computer up-to-date with the latest patches. These updates will close security holes in your computer and hopefully prevent you from being hacked or infected with viruses.

139. What is the firewall? What are the inbound and outbound rules?

Ans – Firewalls provide the security by limiting access to your computer and network, a firewall is also useful for allowing remote access to a private network through secure authentication certificates and logins. Inbound rules are used to filter the traffic that comes to your computer/network and outbound rules are used to filter the traffic that leaves your computer/network.

140. What is UAC?

Ans – User Account Control (UAC) is a feature in Windows that can help to prevent unauthorized changes to your computer. UAC does this by asking you for permission or an administrator's password before performing actions that could potentially affect your computer's operation or that change settings that affects other users.

141. What is Password Reset Disk?

Ans - The password reset disk is essentially a small file that can be used to reset your password, even if you have changed your password since creating the reset disk.

142. What is virtual Memory?

Ans - Virtual memory is a feature of an operating system (OS) that allows a computer to compensate for shortages of physical memory by temporarily transferring pages of data from RAM to disk storage.

143. What are Remote Desktop and Remote Assistance?

Ans - Remote desktop connection and remote assistance are the features that allow a local computer to connect and control a remote PC over a network or a

Internet. By using RDC one can support and resolve the issues remotely. The main difference between them is user can't view his desktop once remote session starts and in remote assistance user can view the screen at same time.

144. What is a Virus? What are the different types of Viruses?

Ans - A computer virus is a program or piece of code that is loaded onto your computer without your knowledge and runs against your wishes and it can damage your data and Operating System. Boot Sector Virus, Browser Hijacker, Direct Action Virus, File injector virus, Macro Virus, Multipartite virus, Polymorphic virus, Resident Virus and Web scripting are the famous viruses.

145. What is kernel?

Ans – Kernel is the core and essential part of computer operating system that provides basic services for all parts of OS.

146. What is the file system?

Ans – Computers use particular kinds of file systems to store and organize data on media, such as a hard drive, CDs, DVDs, flash drives etc. Generally there are most common two types of file systems in Windows i.e. FAT (File Allocation Table) and NTFS (New Technology File System).

147. What is the difference between FAT & NTFS file systems?

Ans –

Sr. No.	FAT	NTFS
1	The maximum file size is 4GB	The maximum file size is 16TB
2	Encryption is not there	Encryption is there
3	Compression is not there	Compression is there
4	There is no any security feature	We can secure access of data by implementing different access policies in NTFS .

148. What is Virtual Hard Disk (VHD)?

Ans – Virtual Hard Disk (VHD) is a disk image file format for storing the complete contents of the hard drive.

149. What is the Compression and Encryption?

Ans –

A) Compression: - Compression is the process of reducing the size of a file by encoding its data information more efficiently.
B) Encryption: - Encryption is the most effective way to achieve data security. To read an encrypted file, you must have access to a secret key or password that enables you to decrypt it.

150. What is Applocker?

Ans – Applocker is a new feature in Windows Operating System that allows you to specify which users or groups can run particular applications in the computer. If you use Applocker, you can create rules to allow or deny applications from running.

151. What is the Device Manager?

Ans – The Device Manager is a Control Panel in Microsoft Windows Operating Systems. It allows users to view and control the hardware attached to the computer.

152. What is Basic and Dynamic Disk?

Ans –

A) Basic Disk: - A basic disk uses primary partitions, extended partitions and logical drives to organize data. Basic disks can have either four partitions or three primaries and one extended partition. The extended partition can

contain multiple logical drives (up to 128 logical drives are supported). A basic disk can be easily converted into Dynamic Disk.

B) Dynamic Disk: - Dynamic disks provide features that basic disks do not, such as the ability to create volumes that span multiple disks (spanned and striped volumes) and the ability to create fault-tolerant volumes (mirrored and RAID-5 volumes). All volumes on dynamic disks are known as dynamic volumes. Dynamic disk cannot be easily converted into Basic Disk.

153. What is Pop-Up Blocker in a browser?

Ans – Pop-up Blocker is a feature in internet Explorer that allows you to block pop-ups from appearing when you browse a web page.

154. What is the VNC (Virtual Network Computing) software? Name any 5?

Ans – VNC works on a client/server model: A VNC viewer (or client) is installed on the local computer and connects to the server component, which must be installed on the remote computer. The server transmits a duplicate of the remote computer's display screen to the viewer.

Team viewer, Show my PC, Ammy Admin, LogMeIn, imPCremote, TightVNC and Aeroadmin are famous VNC software.

155. What is shadow copy?

Ans - Shadow Copy (also known as Volume Snapshot Service, Volume Shadow Copy Service or VSS) is a technology included in Microsoft Windows that allows taking manual or automatic backup copies or snapshots of computer files or volumes, even when they are in use.

156. What is Antivirus?

Ans - Anti-virus software is a program or set of programs that are designed to prevent, search for, detect, and remove software viruses, and other malicious software like worms, Trojans, adware, and more.

157. What is System Repair Disk?

Ans - A system repair disc can be used to boot your computer. It also contains Windows system recovery tools that can help you in recovering Windows from a serious error or restore your computer from a system image.

158. What is System Restore Point?

Ans - System Restore is a feature in Microsoft Windows that allows the user to revert their computer's state to that of a previous point in time, which can be used to recover from system malfunctions or other problems.

159. What is Disk Clean up?

Ans – It is a computer maintenance utility to free up disk space on a computer's hard drive. The utility first searches and analyzes the hard drive for files that are no longer of any use, and then removes the unnecessary files.

160. What is Disk Defragment?

Ans – Disk Defragment is a utility in Microsoft Windows designed to increase access speed by rearranging files stored on a disk to occupy contiguous storage locations.

161. What is BSOD (Blue Screen Of Death) or blue dump error?

Ans – The Blue Screen Of Death (BSOD) error is mainly due to hardware or software incompatibility within the system. The most common reasons for a BSOD are unwanted software installation, high CPU usage and faulty RAM.

162. How to resolve BSOD issue?

Ans –

A) Remove the RAM, rub it with eraser and re-insert.

B) If a BSOD still occurs, try using that RAM on another system.
C) Every BSOD has a unique code; try searching it on Google to find a solution.

163. What is the use of safe mode? When should we use in Windows?

Ans – Often, we have to start Windows in safe mode in order to remove spyware or for troubleshooting driver problems and other diagnostic problems. Only specific programs and files with limited driver support are needed to run the operating system. This will allow you to attempt to remove viruses, change bad drivers and perform other diagnostic tasks that cannot be done in normal mode.

164. What is a network? What are the types of network?

Ans - A group of devices which are connected to each other through some media is called a network. LAN, MAN and WAN are the types of network.

165. What are benefits of network?

Ans – The advantages of network are as below,

A) Sharing information (data).
B) Sharing hardware resources (like printer).
C) Centralized management and security.

166. What is URL?

Ans - URL stands for Uniform Resource Locator and is used to specify address on the World Wide Web (www).

167. What are Internet, Intranet and Extranet?

Ans –

A) Internet – The internet is a globally connected network system that uses TCP/IP to transmit data via various types of media. It is a network of global exchanges – including private, public business, academic and government networks – connected by guided wireless and fiber-optic technologies.

B) Intranet – A privately maintained computer network that can be accessed only by authorized persons, especially members or employees of the organization that owns it.
C) Extranet – An extranet is a controlled private network allowing customers, partners, vendors, suppliers and other businesses to gain information.

168. What is OSI model? Who developed OSI model?

Ans - Open System Interconnection is a conceptual and logical layered model which describes the flow of data from sender to receiving device. It has 7 logical layers and each layer performs specific task on the data. OSI was developed by ISO (International Organization for Standardization).

169. Explain details all 7 layers of OSI model.

Ans –

Layer	Responsibility	Protocol	PDU	Hardware Devices
7. Application Layer	Mail Services, Directory Services, Authentication	HTTP, FTP, SMTP, Telnet		
6.Presentation Layer Layer	Translation, Encryption, Compression			
5.Session Layer	Dialog Control, Synchronization	PAP,SSH, SMB,NFS,PPTP		
4.Transport Layer	Service Point Addressing, Segmentation and reassembly, Connection	TCP, UDP, SPX	Segments	

	control, Error control			
3.Network Layer	Logical addressing, Routing, NATing, Internetworking	IP,IPX,NAT, RIP,EIGRP, OSPF,ICMP, IGMP	Packets	Router,Layer 3 Switches, Gateway, Firewall
3.Data link layer	Framing, Physical Addressing, Error Control	MAC,LLC,HDLC, PPP	Frames	Switch,Bridge, LAN card
1.Physical Layer	Media specification		Bits	Hub, Repeater, Media Convertor, Connector

170. What is the prerequisite to configure M.S. Outlook?

Ans –

1. Email address

2. Password

3. POP and SMTP servers' addresses

4. POP and SMTP port numbers

171. How to take backup and restore M.S. Outlook?

Ans – There are two ways to take backup and restore as follows,

A) Import & Export
B) Copy & Paste

172. What is the difference between IP & MAC address?

Ans –

IP Address	**MAC Address**
It's logical address	It's physical address
It's physical address	Made up of 48 bits
Can be changed as it is temporary	Can't be changed as it is permanent
Represented in decimal format	Represented in hexadecimal format

173. What is the difference between IPv4 and IPv6?

Ans –

IPv4	IPv6
It's a 32 bits address	It's a 128 bits address
32 bits are divided into 4 equal parts; each part is having 8 bits called as an octet.	128 bits are divided into 8 groups; each group is having 16 bits and called a block
Octets are separated by.(dot).	Blocks are separated by : (colon).
IPv4 is written in decimal format.	IPv4 is written in Hexadecimal format.
It uses subnet mask to determine network and host bits.	It uses prefix to determine network and host bits.
It is divided into 5 different classes.	No classification.

174. What is port number of important protocols?

Ans –

Protocol	Port Numbers
FTP (data)	20
FTP (control)	21
SSH	22
Telnet	23
SMTP	25
DNS	53
DHCP	67, 68
TFTP	69
HTTP	80
POP	110
IMAP	143
SNMP	161, 162
HTTPS	443

175. Explain the UTP/STP network cable color coding according to EIA/TIA T-568 A & 568 B.

Ans –

Wire No.	EIA/TIA T-568 A	EIA/TIA T-568 B
1.	White-Green	White-Orange
2.	Green	Orange
3.	White-Orange	White-Green
4.	Blue	Blue
5.	White-Blue	White-Blue
6.	Orange	Green
7.	White-Brown	White-Brown
8.	Brown	Brown

176. What is MAC address? How to check MAC address of the PC?

Ans - MAC address is the physical address of the device which is 48-bits address. Ipconfig /all or getmac commands are used to check MAC address of the computer.

177. What is IP address? What are the classes of IPv4?

Ans - An IP address is a unique identifier of a computer or device in a network through which they are identified can communicate to each other. A, B, C, D and E are the classes of IPv4.

178. What are the ranges of classes A, B, C, D and E?

Ans –

Class	Ranges
A	0-126
B	128-191
C	192-223
D	224-239
E	240-255

179. What is subnet mask? What is the default subnet mask of class A, B and C?

Ans - A subnet mask is a 32-bit number used to differentiate the network component of an IP address by dividing the IP address into a network address and host address.

A	255.0.0.0
B	255.255.0.0
C	255.255.255.0

180. What is difference between private and public IP address?

Ans - The IP address which is assigned by an ISP and is used to communicate in public network (Internet) is called Public IP address whereas an IP address which is used to communicate in private network (Intranet) is called as Private IP address.

181. What are the private IP address ranges in class A, B and C?

Ans –

Class	Private IP addresses range
A	10.0.0.0 to 10.255.255.255
B	172.16.0.0 to 172.31.255.255
C	192.168.0.0 to 192.168.255.255

182. What is a gateway?

Ans - A gateway is a hardware device that acts as a “gate” between two networks. It may be a router, firewall, server or a device that enables traffic flow in and out of the network.

183. What is APIPA?

Ans - APIPA – APIPA(Automatic Private IP Addressing) assigns a class B IP address from 169.254 0.1 to 169.254.255.254 to the client when a DHCP server is either permanently or temporarily unavailable.

184. What is loopback address?

Ans - Loopback Address – Loopback address is a special IP (127.0.0.1 to 127.255.255.254). This range is used to test the communication or transportation medium on a local network card or for testing network applications.

185. What are the different types of Network Cables?

Ans - There are 3 types of network cables

a) Coaxial
b) Twisted Pair
c) Fiber Optic

186. Define Hub, Repeater, Switch, Router and Gateway? Tell me the OSI layer of each device?

Ans –

Hub: - A hub operates at the physical **la**yer of OSI model. It connects multiple devices together in a single network segment. A hub also called multiport repeater. It operates in half duplex mode and doesn't provide guaranteed bandwidth to the connected device.

Switch: - A Switch operates of the Data link layer of OSI model. It connects multiple devices together in a single network segment. It is called an intelligent network device because it creates own MAC address table to forward the frame to the appropriate destination. It operates in full duplex mode and provides guaranteed bandwidth to the connected device.

Router: - Router is a network layer device which communicates deferent networks which may be near or very far. A router sends or forwards the packets to the destination network using the best route.

187. What are DHCP Server, DNS Server and WINS?

Ans –

Dynamic Host Configuration Protocol (DHCP) Server is used to assign automatic TCP/IP configuration to its client.

Domain Name System (DNS) server is use to translate Fully Qualified Domain Names (FQDN) into IP addresses and IP address into Fully Qualified Domain Name.

Windows Internet Name Service (WINS) is use to resolve NetBIOS name into IP address.

188. What are differences between TCP and UDP?

Ans –

TCP	UDP
TCP is the connection-oriented protocol.	UDP is a connectionless protocol.
TCP is reliable.	UDP is unrealiable.
TCP is slow.	UDP is fast.
TCP does error checking	UDP does error checking, but no recovery options.
Acknowledgement is there.	No acknowledgement.
TCP does flow control.	UDP does not do flow control.

189. What is FTP?

Ans – The File Transfer Protocol (FTP) is a standard network protocol used to transfer computer files from one host to another host over a TCP-based network.

190. What is difference between HTTP and HTTPS?

Ans –

HTTP	**HTTPS**
HTTP (Hyper Text Transfer Protocol) is used in networking. It uses port no 80 for communication.	HTTPS (Hyper Text Transfer Protocol) is used in networking. It uses port no. 443.
It is unsecured.	It is secured.
No encryption.	It is encrypted.
No certificates required.	SSL certificate is needed.

191. What is a router?

Ans - Router is a network layer device which communicates deferent networks which may be near or very far. A router sends or forwards the packets to the destination network using the best route.

192. What is a switch?

Ans - A Switch operates of the Data link layer of OSI model. It connects multiple devices together in a single network segment. It is called an intelligent network

device because it creates own MAC address table to forward the frame to the appropriate destination. It operates in full duplex mode and provides guaranteed bandwidth to the connected device.

193. What is a Telnet?

Ans - Telnet is an application protocol for accessing remote computers.
Through **Telnet**, an administrator or another user can access other computers remotely.

194. What is ping command?

Ans - The Packet Internet Gopher (Ping) command helps to verify IP-level connectivity. When troubleshooting, you can use ping to send an ICMP echo request to a target host name or IP address.

195. What is use of tracert command?

Ans - Tracert command can show you the path of packet from your computer to the Destination. It will list all the routers it passes through until it reaches its destination.

196. What is the use of pathping command?

Ans - The pathping command is a route tracing tool that combines features of the ping and tracert commands. The pathping command sends packets to each router on the way to a final destination over a period of time

197. What is the difference between wired and wireless LAN?

Ans –

Wired LAN	Wireless LAN
IEEE standard is 802.3.	IEEE standard is 802.11.
Devices are physically connected.	Devices are logically connected.
Faster data transmission rate.	Slower data transmission rate.
More secure.	Less secure.
Covers large distance.	Covers short distance.

198. What is the deference between Ad-Hoc and Infrastructure wireless Network?

Ans - In Ad-hoc network devices are connected in wireless network using their LAN cards and Access Point or Wireless Router is not required in Ad-Hoc.

In Infrastructure network devices are connected in network through Wireless Access Point of Wireless Route.

199. What is SSID in wireless network?

Ans – SSID is the name assigned to a Wi-Fi (wireless) network. All devices in the network must use this case-sensitive name to communicate over Wi- Fi. Wireless routers and access points have a default SSID, which may be the manufacturer's name, such as "Linksys" or "netgear" or simply "default". Some devices use their model number as the SSID. Using browser, the SSID (and password) can be manually changed in the device's configuration settings.

200. What is the MAC filtering?

Ans - MAC Filtering refers to a security access control method whereby the 48-bit address assigned to each network card is used to determine access to the network.

201. What are the different ways to share the internet?

Ans – Followings are the ways to share the internet

A) Internet Connection Sharing (ICS)
B) Network Address Translation
C) Proxy

202. What is E-mail Client? Name of any 5?

Ans - E-mail client is an application which allows you to store mails locally on your computer so that you can access previously stored mail even you are not connected to internet. MS-Outlook, Windows-Mail, Mozilla Thunderbird, Lotus notes, Postbox and Apple mail are some famous email clients.

203. What is Office 365?

Ans - Microsoft Office 365 is Software as a Service (SaaS) solution that includes Microsoft Office and other services, such as email and collaboration, from Microsoft's cloud server. Microsoft Office *365* provides desktop functionalities and is available by subscription.