COMPUTER HARDWARE & NETWORKING   (Year 2016)

1. Answer any twenty questions: 1x20

Choose the most suitable answer from the given alternatives:

i) _____ is NOT a type of motherboard expansion slot (ISA / PCI / AGP/ ATX).

Ans: ATX

Note: ATX (Advanced Technology eXtended) is a motherboard and power supply configuration specification developed by Intel in 1995. So it is not an expansion slot.

ii) _____retains the information when the power is turned off (CPU / DRAM / ROM/ DIMM).

Ans: ROM

iii) _____ is NOT a type of computer hard drive (IDE / FDD / EIDE/SCSI).

Ans: FDD

Explanation: Full form of IDE is Integrated Drive Electronics, IDE is generally two types: ATA or PATA (parallel ATA) and SATA (serial ATA) . ATA stands for Advanced Technology Attachment

Full form of EIDE is "Enhanced Integrated Drive Electronics." EIDE is an improved version of the IDE drive interface that provides faster data transfer rate.

Full form of SCSI is Small Computer System Interface, SCSI is pronounced as "Scuzzy" and is one of the most commonly used interface for disk drives.

So Hard Disk Drive Interfaces are:

There are several standards connected with the Hard Disk Drives these are:

- IDE/EIDE
- SCSI
- Serial ATA or SATA
- PATA

iv) To plug a telephone line into a modem _____ connector is used. (RJ-45 / RJ-11 /COM1/RJ-13).

Ans: RJ-11

v) Commonly system timer use _____ IRQ (0 / 1 / 2/ 9).

Ans: 0

In a computer, an interrupt request (or IRQ) is a hardware signal sent to the processor that temporarily stops a running program and allows a special program, an interrupt handler, to run instead. Hardware interrupts are used to handle events such as receiving data from a modem or network card, key presses, or mouse movements.

RQ Number	Typical Use	Description
IRQ 0	System timer	This interrupt is reserved for the internal system timer. It is never available to peripherals or other devices.
IRQ 1	Keyboard	This interrupt is reserved for the keyboard controller. Even on devices without a keyboard, this interrupt is exclusively for keyboard input.

vi) Laser Jet printer speeds are measured in _____ (ppm/ rpm/ rps/ lps).

Ans: PPM: Pages Per Minute

vii) For the hard drive _____values are hold in CMOS (heads, cylinders, sectors/ IRQ / FAT/ NTFS).

Ans: heads, cylinders, sectors

viii) A COM port is a _____ port (parallel / serial / static/ SCSI).

Ans: serial

COM (Communication port) is a serial port interface on PC-compatible computers.

ix) OSI stands for _____ (open system interconnection / operating system interface / optical service implementation / none of the mentioned).

Ans: open system interconnection

OSI (Open Systems Interconnection) is a reference model it describes how applications communicate over a network.

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x) TCP/IP model was developed _____ the OSI model. (prior to / after / simultaneous to).

Ans: prior

The TCP/IP model, which is realistically the Internet Model, came into existence about 10 years before the OSI model.

xi) _____ layer is responsible for process to process delivery (network / data link / session / transport).

Ans: Transport

The transport layer is responsible for the process to process delivery of the entire message.

xii) _____ address identifies a process on a host. (physical / logical / port / specific).

Ans: Port

Explanation: A port number is a 16-bit unsigned number used to identify a specific process to which an Internet or other network message is to be forwarded when it arrives at a server. Some examples of port numbers: port 20 which is used for FTP data, port 22 which is used for SSH remote login, and port 23 which is used for TELNET.

xiii) _____ cable has the highest transmission speed in a network (coaxial / twisted / optical fiber/ electrical).

Ans: optical fiber

xiv) A single channel is shared by multiple signals by _____ (analog modulation / digital modulation / multiplexing).

Ans: Multiplexing

Multiplexing is a process by which multiple analog or digital signals are combined into one signal over a shared medium.

xv) The data link layer takes the packets from _____ layer and encapsulates them into frames for transmission (network / data link / session / transport.

Ans: Network Layer

xvi) Header of a frame generally contains_____(synchronization bytes/address/ frame identifier)

Ans: All the three

Explanation: In a frame, the header is a part of the data that contains all the required information about the transmission of the file. It contains information like synchronization bytes, addresses, frame identifier etc. It also contains error control information for reducing the errors in the transmitted frames.

xvii) The 4 byte IP address consists of_____(network address/ host address/ network & host address)

Ans: network & host address

xviii) 255.0.0.0 is subnet mask for Group _____address (A/B/C)

Ans: Group A

xix) A _____ is a TCP name for a transport service access point (port/ pipe/ node)

Ans: Port

Explanation: Just as the IP address identifies the computer, the network port identifies the application or service running on the computer. A port number is 16 bits. The combination of IP address preceded with the port number is called the socket address.

xx) The _____ translates internet domain and host names to IP address (DNS/ARP/DHCP)

Ans: DNS (Domain Name System)

xxi) In asymmetric key cryptography, the private key is kept by (sender/ receiver/ both sender & receiver)

Ans: receiver

Explanation: The private key is kept only by the receiver of the message. Its aim is to make sure that only the intended receiver can decipher the message.

xxii) In cryptography, the order of the letters in a message is rearranged by_____ ciphers (transposition/ substitution/ both transposition substitutions).

Ans: transposition

Explanation: In transposition ciphers, the order of letters in a plaintext message is shuffled using a pre-defined method. Some of such ciphers are Rail fence cipher and columnar transposition.

xxiii) When displaying a web page, the application layer uses the_____ protocols (HTML/FTP/SMTP)

Ans: HTML

xxiv) The switch used in a network lab follows _____ topology. (ring/ bus/ star/ mesh)

Ans: star

xxv) 48.18.32.31 is a class _____ address. (A/ B/ C)

Ans: Class A

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