

# CS610 Solved Grand Quiz Spring 2021

In Cyclic Redundancy Checking, CRC is \_\_\_\_\_.

- Divisor
- Quotient
- **Remainder page 20**
- Dividend

The satellite or radio topology in which all computers are connected to each other via satellite or radio wave is a kind of

- **Broadcast network page 5**
- Point-to-Point network

Which of the following two operations are performed by Ethernet CD?

I. It monitors outgoing signals.

II. Grabbled signal is interpreted as a collision.

III. Signals are sent back to the sender.

- I and III
- II and IV
- II and III
- **I and II page 28**

The process of forwarding a packet is called \_\_\_\_\_.

- **Routing page 58**
- Processing
- Hierarchical Addressing
- Source Addressing

Which statement is correct about Network Interface Card (NIC)?

I. NIC contains sufficient hardware to process data independent of system CPU

II. NIC looks like any other I/O device to system CPU

III. NIC also receives interrupt on incoming data.

- I and II
- II and III
- I and III
- **All of the given options**    page 40

While transmitting data from source A to destination B, 4 bits are changed during the transmission then the error is a \_\_\_\_\_.

- **Burst error** page 22
- Single error
- Double error
- Logic error

The switch that has no attached computers is called \_\_\_\_\_.

- Packet Switch
- Exterior Switch
- **Interior Switch**    page 59
- External Switch

\_\_\_\_\_ is the most popular wiring scheme because of lowest cost.

- 5 Base T
- **10 Base T**    page 43
- 100 base T
- 1000 base T

In \_\_\_\_\_ technique, all members of the network can send data only on the specific time slot?

- CDMA
- FDMA
- **CSMA**    page 43
- TDMA

If a sender with a 100 Megabit NIC and receiver with 10 Megabit NIC wants to communicate with each other at which speed they can communicate?

- 110 Megabit
- 1000 Megabit
- 10 Megabit
- **100 Megabit**    page 40

Missing \_\_\_\_\_ in a frame format indicates receiving computer missed

**beginning of the message.**

- eot
- sot
- eoh
- **soh**                      **page 16**

**The \_\_\_\_\_ of errors is easier than the \_\_\_\_\_ of errors.**

- correction; detection
- correction; creation
- detection; manipulation
- **detection; correction**      **cs601 handouts**

**The \_\_\_\_\_ of errors is difficult than the \_\_\_\_\_ of errors.**

- detection; correction
- correction; creation
- detection; manipulation
- **correction; detection**                      **google**

**Source Independence phenomenon allows fast and efficient \_\_\_\_\_.**

- Source Addressing
- Routing
- **Packet Switching**                      **page 58**
- Store and forward

**In distributed route computation process each packet switch computes its routing table locally and sends messages to the \_\_\_\_\_.**

- Router
- Graph
- **Neighbors**      **page 63**
- WAN

The \_\_\_ layer of the OSI model takes the data from the physical layer and perform error checking.

- Transport
- **Data link**                      **google**
- Application
- Presentation

CBR stands for \_\_\_\_\_.

- Constant Byte Rate
- **Constant Bit Rate**
- Connection break Recovery
- Constant Borrow Rate

A network that uses \_\_\_\_\_ usually consist of a single long cable to which computer attach.

- Star Topology
- Ring Topology
- **Bus Topology**            **page 26**
- Bus and Ring Topology

If simultaneous transmission occurs, the frames interfere with each other and this phenomenon is called \_\_\_\_\_.

- packet loss
- **collision**    **page 28**
- delayed transmission
- coordination

In \_\_\_\_\_ all computers are attached to a central hub

- Ring topology
- **Star topology**            **page 31**
- Hub topology
- Bus topology

For adding a new computer in a point to point network \_\_\_\_\_new connection will be required

- N
- **N-1**        **page 23**
- N-2
- 2N

The fastest Ethernet hardware operates at a rate of \_\_\_\_\_

- 1000 bps
- **100 Mbps**    **page 27**
- 10 Mbps
- 1000 Mbps

Which of the following the benefit to point to point communication?

- Quick to configure.
- **Security implementation**            **page 23**
- Cost

- Less availability

ATM offers \_\_\_\_\_speed and \_\_\_\_\_delay

- High, High
- **High, low**      **page 72**
- Low, low
- Low, high

Thick Ethernet is known as \_\_\_\_\_

- 10 Base 2
- **10 Base 5**   **google**
- 10 Base T
- 10 Base 10

Both interior and exterior switches \_\_\_\_\_packet and they also need routing tables.

- Create
- Delay
- **Forward**      **page 59**
- Start

\_\_\_\_\_is the rate at which data can be sent through the network

- **Throughput**   **page 79**
- Propagation delay
- Access delay
- Switching delay

In a ping command, small –sized information packets of \_\_\_\_\_are sent.

- TCP
- UDP
- **ICMP**   **page 11**
- IGMP

Many WANs use \_\_\_\_\_addressing of efficiency

- Sequence
- Forward
- **Hierarchical**   **page 56**
- Sequential

Which of the following is not a function of ping commends?

- Local computer network issue
- Congestion in the network
- **Relay nodes page 11**
- Remote host availability

Packet switched can be linked together to form a \_\_\_\_\_

- LAN
- **WAN page 56**
- Bridge
- None of the given option

Fixed network is a type of network which is classified with respect to the factor

- Size
- Connectivity
- Medium
- **Mobility page 6**

Parity bit can detect \_\_\_\_\_ error(s)

- 4
- 3
- **2 page 19 (even or odd)**
- 1

When we will try to connect to the internet which of the following protocol will be used?

- Telnet
- **TCP/IP page 84**
- ICMP
- IPx

How many computers are mandatory to form a network?

1

**2 google**

4

8

\_\_\_\_\_ is standard wireless LAN that uses radio signals at 2.4GHz.

- IEEE 803.16

- IEEE 802.15
- IEEE 802.3
- **IEEE 802.11 page 29**

LAN interface hardware obeys \_\_\_\_\_ access rule.

- **CSMA/CD page 34**
- Round robin
- First come first served
- High priority

The most important task a bridge performs is \_\_\_\_\_.

- Packet switching
- Line controlling
- Noise controlling
- **Frame filtering page 50**

ATM uses small, fixed-sized packets called cells and each cell has \_\_\_\_\_ octets.

- 47
- 52
- **53 page 66**
- 55

\_\_\_\_\_ can't be guaranteed with variable length packets as easily as it can with fixed length cells.

- Errors
- Noise
- Quality of Service
- **None of the given page 72**

Which multiplexing technique transmits digital signals?

- WDM
- FDM
- **TDM page 15**
- GSM

Connections in Asynchronous transfer mode are called \_\_\_\_\_.

- **Virtual channels page 67**
- Virtual Path Identifier
- Cells
- Cell tax

A \_\_\_\_\_ is a device that combines multiple signals and forwards into a single line.

Modem

**Multiplexer page 41**

Repeater

Layer 3 Switch

\_\_\_\_\_ is inflexible.

- Routing
- Searching
- Processing
- **Static routing**            **page 62**

If a hub is used to connect many computers in a LAN, then only \_\_\_\_\_ computers can communicate at a given time.

- Three
- **Two**            **page 54**
- Four
- One

\_\_\_\_\_ is the term used for variance in transmission delays.

Friction

Segment

Checksum

**Jitter**            **page 66**

\_\_\_\_\_ is also called self healing network.

ATM

FDDI

Token Ring

**Frame relay page 46**

\_\_\_\_\_ and \_\_\_\_\_ are the two frame types.

- Internal and external
- Single and dual
- Implicit and explicit
- **Multicast and broadcast**     **page 35**

Bluetooth uses shared medium and \_\_\_\_\_ instead of coaxial cable.

- **Radio waves**             **page 29**
- Infrared waves
- Micro waves
- Low frequency waves

Which of the following is not a guided medium?

- Twisted pair cable
- Fiber-optic cable
- **Atmosphere**             **google**
- Coaxial cable

As a result of ARPA research, the first network was established which was named as \_\_\_\_\_.

- INTERNETWORKING
- ARPNET
- **ARPANET**     **page 9**
- PACKET NETWORK

Asynchronous transfer mode (ATM) can dynamically establish a \_\_\_\_\_.

- **Switched virtual circuit**     **page 70**
- Virtual connection identifier
- Virtual path indicator
- None of the given options

A typical port on an ATM switch operates at \_\_\_\_\_ or \_\_\_\_\_ higher.

**OC-2 speed (155Gbps)**

**OC-2 speed (1000Mbps)**

**OC-3 speed (155Mbps)**     **page 72**

**OC-3 speed (100Gbps)**

10Base-T Ethernet is often called a \_\_\_\_\_.

- ring shaped star

- ring shaped bus
- **star shaped bus**      **page 46**
- star shaped ring

\_\_\_\_\_ allows automatic updates.

- **Dynamic routing**      **page 62**
- Static routing
- Routing
- Default routing

Handling variable length packets leads to memory \_\_\_\_\_.

- **Fragmentation**      **page 72**
- Management
- Location
- Allocation

In order to forward a copy of frame, the bridge uses \_\_\_\_\_ address.

- Network
- **Destination page 51**
- IP
- Source

We may use \_\_\_\_\_ to extend local area network.

- Bridge, Router
- Bridge, Hub, Router
- **Bridge, Hub, Repeater**      **page 149**
- Bridge, Hub, Repeater, Router

All of the given options are the types of delay except \_\_\_\_\_.

- Propagation
- Access
- **Throughput page 79**
- Queuing

While computing shortest path in a graph, next hop information is inserted into \_\_\_\_\_.

- **Routing table**      **page 62**
- Trailer
- Header
- Register

LAN interface uses \_\_\_\_\_ to copy frame data directly from main memory

- DMA            page 34
- FDDI
- Hard disk
- Flash

The Gigabit Ethernet hardware operates at a rate of \_\_\_\_\_.

- 10 Mbps
- 100 Mbps
- 1000            Mbps    reference book page 263
- 1000            Gbps

In the early resource sharing era, which resources were shared among users?

- **Computation**            **page 9**
- Floppy Drives
- Hard Disk
- Printers

If two buildings are located far from each other then bridge, and \_\_\_\_\_ can be used to connect two LAN.

- **Optical fiber**            **page 51**
- Ethernet modem
- Switch
- NIC

Which type of network consists of wireless connection of laptops in a university classroom?

- WAN
- MAN
- Fog
- **LAN**            **google**

A typical bridge has \_\_\_\_\_.

- One NIC, a CPU a memory and a ROM.
- **Two NICs, a CPU a memory and a ROM.**            **page 50**
- RAM, ROM and CPU.
- A cache memory, ROM and CPU.

\_\_\_\_\_ is used for compressed audio and video, where the data rate depends on the level of compression that can be achieved.

- Constant Bit Rate
- Stable Bit Rate
- **Variable Bit Rate**    **page 71**
- Available Bit Rate

There are \_\_\_\_\_ types of data stuffing.

- 1
- **2**    **page 17**
- 0
- 5

Dijkstra's algorithm can accommodate weights on \_\_\_\_\_ in graph.

- **Nodes**    **page62**
- Edges
- Path
- Connections

\_\_\_\_\_ masks your IP address.

- Firewall
- Antivirus
- **VPN**
- Incognito mode

Static routing computes routing table information at \_\_\_\_\_ time.

- Load
- **Boot**            **page 62**
- Execute
- One

\_\_\_\_\_ was the first automated tool required to see whether the given computer is online or not.

- Probing program
- PING program
- status program
- **None of the above**    **page 11**

In which type of error detection, the arithmetic sum is calculated before and after the transmission of data at both communication ends?

- CRC
- Parity

- **Checksum page 19**
- Hash Function

Computer sends a connection request to the \_\_\_\_\_ to which it is attached while establishing a switched virtual circuit

- Bridge
- Switch page 70
- VPI
- Virtual circuit

The bridges communicate with each other on the network and use \_\_\_\_\_ algorithm to decide which bridge will not forward frames if a cycle occurs.

- Dijkstra
- Shortest path first
- Vector distance
- **Distributed Spanning Tree page 53**

Ethernet uses a \_\_\_\_\_ bit static addressing scheme in which each device is assigned a unique address by the manufacturer.

- 64
- **48**
- 32
- 16

Weights on graph edges reflect cost of \_\_\_\_\_.

- Nodes
- **Traversing edge page 63**
- Trending edge
- Path

A \_\_\_\_\_ relies on the hardware manufacturer to assign a unique physical address to each network interface.

- **Static addressing scheme page 34**
- Configurable addressing scheme
- Dynamic addressing scheme
- None of the given

In \_\_\_\_\_ topology, if the switch goes down all the computers will be disconnected.

- **Star**
- Ring

- Bus
- Mesh

Which type of network consists of wired computers in a university classroom?

- MAN
- PAN
- WAN
- **LAN**

81. If you as a network administrator want to know the traffic flow of your data while communicating with a remote computer which of the following will be used to know about intermediate routers?

- Ipconfig
- **Ping**            **page 11**
- Traceroute
- Arp

Hardware address is also called \_\_\_\_\_.

- **Physical address**
- Logical address
- IP address
- Port address

Thick Ethernet also requires \_\_\_\_\_ to avoid signal reflectance.

- Transceivers
- AUI cable
- Drop cable
- **Terminators**            **page 41**

Which of the following network is using the TCP/IP model globally?

- PAN
- SAN
- LAN
- **The Internet**

VPNs connections are sometimes called \_\_\_\_\_.

- **Tunnels**            **page 75**
- Open networking
- Routing
- Public network

To reduce \_\_\_\_\_ computers can be connected and distributed to a number of hubs, then the hubs can be connected to a switch.

- **Costs**      **page 54**
- Quality
- Efficiency
- Noise

If a \_\_\_\_\_ is used the communication between two computers will not affect the other pair of computers and they can communicate at the same time

- Hub
- **Switch**      **page 54**
- Repeater
- Amplifier

The length of hardware address is \_\_\_\_\_.

- One to ten bytes
- One to five bytes
- **One to six bytes**      **page 34**
- One to seven bytes

A network analyzer is also called \_\_\_\_\_.

- Network manager
- Network administrator
- **Network monitor** page 37
- Network

90. No any error detection scheme is perfect because transmission errors can affect \_\_\_\_\_.

- Data
  - Additional Information
  - **Additional information & data** google
  - Transmission medium

The token ring network topology is a ring but wiring topology is a \_\_\_\_\_.

- **Star**      **page 44**
- bus
- tree
- mesh

\_\_\_\_\_ addresses are used in an ethernet frame.

- **IP page 99**
- Port
- Logical
- MAC

AUI cable connects from NIC to \_\_\_\_\_.

- BNC Connector
  - RJ-45 Connector
  - **Transceiver page 41**
  - Terminator

Public networks are \_\_\_\_\_.

- More secure than LAN
- Flexible page 74
- Limited in boundary
- Intranet

The maximum cable length of a LAN is fixed because \_\_\_\_\_.

- Additional hardware are not suitable for the LAN extension.
- **The electrical signal level gets weaker as it travels. Page 48**
- Additional software are not suitable for the LAN extension
- The electrical signal level gets stronger as it travels.

In \_\_\_\_\_ network topology is separated from route computation.

- Local area
- **Link-state routing page 64**
- Static routing
- Dynamic routing

Which layer of the OSI Model directly communicates and controls the transmission medium:

- Transmission
- **Physical**
- Application
- Network

In \_\_\_\_\_ technique data is treated as a sequence of integers and their arithmetic sum is computed and the carry bits are added to the final sum.

- CRC
- Bit stuffing
- **Checksum page 19**

- 2D Parity

A network with \_\_\_\_\_ jitter takes more time to deliver some packets than others.

- Zero
- **High**            **page 80**
- Low
- Moderate

A network uses \_\_\_\_\_ to arrange computers in a single closed loop.

- Star Topology
- Mesh Topology
- **Ring Topology**            **page 25**
- Bus Topology

Which of the following tasks is not done by the second layer of the OSI model?

Flow control

Framing

Channel coding        google

Error control

ATM is a single technology designed to meet the goals of both \_\_\_\_\_ and \_\_\_\_\_.

LAN & PAN

**LAN & WAN**            **page 66**

LAN & MAN

MAN & WAN

LAN and WAN are classified according to their \_\_\_\_\_.

- **Size**            **page 4**
- Connectivity
- Medium
- Mobility

The identifier that is used for data transfer in the virtual circuit network is called \_\_\_\_\_.

- **Virtual circuit identifier**

- Global address
- Network identifier
- IP identifier

In Direct point to point communication adding the Nth computer requires \_\_\_\_\_ new connections

- $N^2$
- $N-1$
- $(N^2 - N)/2$  **page 23**
- $N(N-1)$

Which of the following is the correct function of bridge?

- MTU path discovery
- Byte stuffing
- Routing information
- **Filtering and forwarding a frame** **page 50, 51**

Point to point topology is

- Size based
- Mobility based
- **Connectivity based page 5**
- Medium based

IEEE LLC / SNAP header is \_\_\_\_\_ which is used to specify the type of data.

- **8 octets** **google**
- 16 octets
- 32 octets
- 64octets

IEEE LLC / SNAP header is \_\_\_\_\_ which is used to specify the type of data.

- CRC
- Bit stuffing
- Checksum
- 2D Parity

What is the largest network in existence?

- **The internet** **google**
- A PAN
- A Fog
- Edge Network

The frame format of any LAN technology must consists of \_\_\_\_ and \_\_\_\_ -

Payload and CRC

Frame header and CRC

Payload and Frame type

**Frame header and payload page 36**

\_\_\_\_\_ can occur a LANs when a packet is delayed because the network is busy

- Jitter           page 66
- Loop
- Deadlock
- variance

Which of the following cannot be used to extend a LAN?

- Repeaters
- Switches
- Routers
- **Fiber modems**

Links-state algorithm is used in \_\_\_\_\_

- RIP
- IGRP
- RIPv2
- **OSPF**           page 64

According to size, there are \_\_\_\_ classifications of networks

- **2**   page 2
- 3
- 4
- 5

In which topology terminators are used at the end of the cable?

- Star
- **Bus**
- Ring
- Mesh

Switch simulates a \_\_\_\_\_ LAN connecting segments

- Single
- Single shared
- **Bridged** page 54
- Complex

PVS stands for \_\_\_\_\_

a. **Permanent virtual circuit** page 69

b. Private virtual circuit

c. Public virtual circuit

d. Plastic virtual circuit

Hardware that calculates a CRC used two simple components \_\_\_\_\_

- AND unit and XOR Unit
- **Shift register and XOR unit** page 20
- Shift register & AND unit
- Shift register and Shift XCR unit

Thin ethernet is known as \_\_\_\_\_

a. **10 base 2** google

b. 10 base 5

c. 10 base T

d. All of the above

If a sender with a 1 Gigabit NIC and receiver with 100 Megabit NIC wants to communicate with each other than at which speed they can communicate

- 11 Megabit
- **100 Megabit**
- 1 Gigabit
- Gigabit

\_\_\_\_\_ is used as an alternative of packet for a specific computer network technology

- Datum
- Token
- Ether
- **Frame** page 14

The sharing of a medium and its link by two or more devices is called \_\_\_\_\_

- Modulation
- Encoding
- **Multiplexing**
- Line discipline

The topology each computer is connected to a central hub is called

- Ring topology
- **Star topology**            **page 5**
- Tree topology
- Mesh topology

Asynchronous transfer mode (ATM) is designed to work on fiber but can be used with \_\_\_\_\_

- Wireless
- **Twisted pair**            **page 72**
- Wifi
- Bluetooth

The basic responsibility of NIC is \_\_\_\_\_

- **To access medium network**
- To resource allocation
- To access memory
- All of the given option

Frame relay is \_\_\_\_\_

**a. Connection oriented service**            **page 64**

b. Connectionless service

c. Typically ranges for 5 Mbps to 1000Mbps

d. Call based

The length of time required to send a variable length packet is \_\_\_\_\_

- 5 second
- **Variable**            **page 72**
- Constant
- Fix

ABR stands for \_\_\_\_\_

- Asynchronous bit rate
- Asynchronous byte recovery
- Asynchronous bit redundancy
- **Available bit rate** page 71

In Token Ring, if all computers are ready to transmit it enforces \_\_\_\_\_ Access

- First come first served
- **Round Robin** page 30
- Shorter delay
- Last come first served

The Ethernet standard specifies that frames are sent using the \_\_\_\_\_ scheme.

Differential Manchester

Not Return to Zero (NR2)

**Manchester Encoding** page 27

Return to Zero (RZ)

ATM uses the concept of \_\_\_\_\_.

**a. Connection-oriented** page 66

b. Connection-less

c. variable packet size

d. Fixed and variable packet size

133. Which of the following is a benefit of point to point communication?

- Quick to configure
- **Security implementation**
- Cost
- Less availability

\_\_\_\_\_ is not used to extend LAN.

- Hub
- **Fiber modem**
- Repeater

- Bridge

Which types of VPNs are used for corporate connectivity across companies residing in different geographical locations?

- Remote access VPNs
- Peer-to-peer VPNs
- Country-to-country VPNs
- **Site-to-site VPNs** google

Star topology is the kind of

a. Tree topology

**b. Point-to-point topology page 05**

c. Broadcast topology

d. Ring topology

In a \_\_\_\_\_ state, a bridge allows simultaneous use of each segment.

- Ready
- **Steady**
- Final
- Startup

The network occupies larger areas like cities & countries is called

- LAN
- **WAN**
- MAN
- All of the above

In link state routing \_\_\_\_\_ send link-state information about local connections.

- Bridge
- **Switches**
- Routers
- Hubs

Transmission media are usually categorized as \_\_\_\_\_.

- **Guided or unguided**
- Fixed or unfixed
- Determinate or indeterminate

- Metallic or nonmetallic

Even parity can be used to check for \_\_\_\_\_ bit/ bits of errors.

**a. 1 page 18**

b. 2

c. 3

d. 0

Routing table entries can be \_\_\_\_\_ with a default route.

- **Collapsed**
- Redirected
- Emerged
- Guaranteed

The system administrator must coordinate to avoid the conflict in \_\_\_\_\_ hardware addressing scheme.

- Static
- Dynamic
- **Configurable**
- Fixed

\_\_\_\_\_ network does not depend on CSMA/CD.

- **Ethernet**
- Fast Ethernet
- Gigabit Ethernet
- Wireless

Which of the following technologies can extend the diameter of LAN medium?

- Fiber optic
- Repeater
- Diameter of LAN medium is not extendable
- **Both. Fiber optic and Repeaters**

Connections are formed in Asynchronous transfer mode by starting values in \_\_\_\_\_ in ATM switches, as opposed to making actual electrical connections.

- Heap
- Stack

- Virtual Circuit
- **Memory locations page 67**

The \_\_\_\_\_ scheme must be reliable to prevent conflicts.

a. Static

**b. Dynamic page 34**

c. Configurable

d. Fixed

Metropolitan area network is used for \_\_\_\_\_.

**a. City page 55**

b. Building

c. Country

d. Continent

Which addressing can be only used in the local area networks?

**a. IP google**

b. Physical

c. Port

d. Protocol

The sharing of a \_\_\_\_\_ among the workers in an office is a goal of resource sharing.

- Mouse
- **Printer page 9**
- Keyboard
- Motherboard

ATM uses fixed size, small cells, 48 octet's data and \_\_\_\_\_.

a. Octets header

**b. 5 Octets header page 65**

- c. 6 Octets header
- d. 7 Octets header

Which of the followings is not an advantage of framing?

- Missing eot indicates sending computer crashed.
- Missing soh indicates receiving computer missed beginning of message.
- **Delimiters do not contain any user data** page 16
- Bad frame is discarded.

The \_\_\_\_\_ field of Ethernet frame has the purpose of receiver synchronization.

**a. Preamble** page 36

- b. Frame Type
- c. Data
- d. CRC

\_\_\_\_\_ was the first internet available for the first time.

- ARPANAT
- The ARPNET
- The NET
- **ARPANET** page 9

We need packets rather than bits because \_\_\_\_\_

- To compress the data
- Packets move faster
- **Sender and receiver need to coordinate to detect transmission errors. Page 14**
- Packets can only move between two terminals

When an application \_\_\_\_\_ any data, it makes a copy of the data available to all other computers on the network.

**a. Multicast** page 143

- b. Broadcast
- c. Anycast
- d. Unicast

VBR stands for \_\_\_\_\_

- Virtual Bit Rate
- Virtual Byte Rate
- Variable Byte Redundancy
- **Variable Bit Rate**    **page 71**