

1. Why the RTS and CTS are not used in CSMA/CD?

CSMA/CD stands Carrier Sense Multiple Access with Collision Detection, that means it provides different mechanisms and methods to detect collisions. RTS/CTS are used in wireless networks because wireless networks cannot detect the collision, hence, there has to be a way to maintain the communication collision free.

---

Define routing and forwarding?

Routing is the process of selecting a path for packets to travel in a network.

Forwarding: ....

---

Explain bellman ford algorithm?

---

Define the network mask?

\*32-bit number of contiguous 1's followed by contiguous 0's.

To help to find the net ID and the host ID.\*

---

What is the difference between slotted aloha and CSMA?

\*Main difference between Aloha and CSMA is that Aloha protocol does not sense whether the channel is free before transmitting.

CSMA sense the channel if its free before transmitting data.\*

---

Ethernet frame?

Preamble	SFD	Destination address	Source address	Length or type	Data and padding	CRC
7 bytes	1 byte	6 bytes	6 bytes	2 bytes		4 bytes

---

CRC→ binary division

Sender and receiver

---

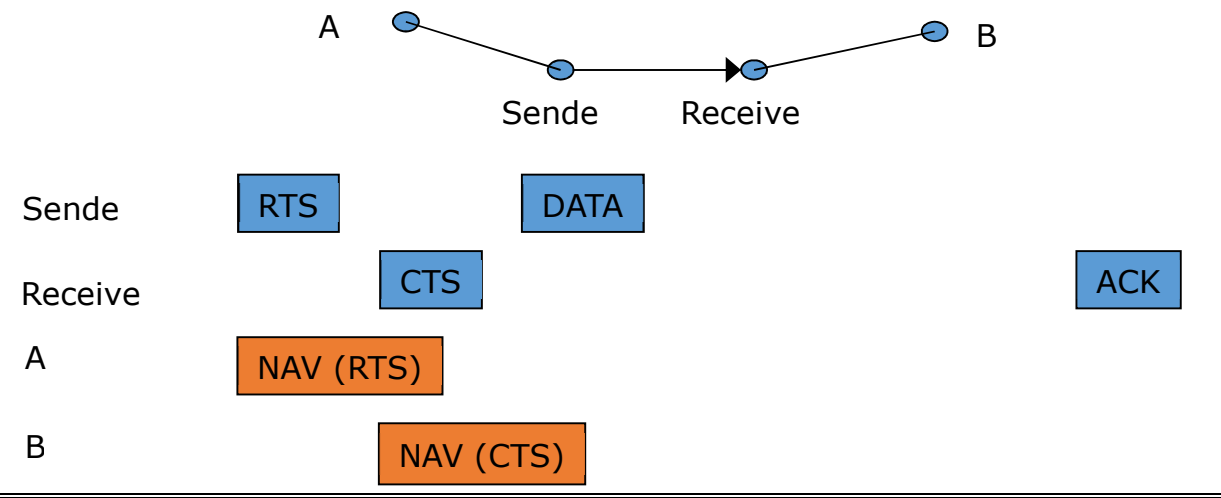
Slotted time in Ethernet ..given 10 mb

---

Max & Min Ethernet frame:  
**Minimum: 64 bytes (512 bits)**  
**Maximum: 1518 bytes (12,144 bits)**

---

Explain with a diagram how the CSMA/CA uses different inter frame between the frames?



ou want to do

ted View.

(4 marks )

A company has a network address of 192.168.1.0 with a subnet mask 255.255.255.0. The company wants to create 8 subnetworks.

1. Determine the class of this address.  
**Class C.**
2. How many bits must be borrowed from the host portion of the address?  
**Only 3 bits.**
3. Determine the new network mask.  
**255.255.255.224.**
4. Determine the address of the different subnets?  
**We have 8 different subnet addresses:**  
192.168.1.0  
192.168.1.32  
192.168.1.64  
192.168.1.96  
192.168.1.128  
192.168.1.160  
192.168.1.192  
192.168.1.224
5. How many hosts can be connected to each subnet?  
**30.**