GATE CSE NOTES

by

UseMyNotes

Ethernet in Networking | Practice Problems

 Computer Networks

Ethernet in Networking-

Before you go through this article, make sure that you have gone through the previous article on **Ethernet**.

We have discussed-

- Ethernet is one of the standard LAN technologies used to build wired LANs.
- Ethernet uses bus topology in which all the stations are connected to a half duplex link.
- Ethernet uses **CSMA / CD** as an access control method.

In this article, we will discuss practice problems based on Ethernet.

PRACTICE PROBLEMS BASED ON ETHERNET-

Problem-01:

Which of the following characteristic is most basic to LAN?

1. Bit rate
2. Delay x Bandwidth Product
3. Geographical distance
4. Cost

Solution-

- Geographical distance is the basic criteria on which networks are classified.
- On the basis of geographical distance, networks are classified as LAN, MAN, WAN.
- Thus,Option (C) is correct.

Problem-02:

On an Ethernet LAN when a collision is detected, the sending station-

1. continues to send the transmission
2. temporarily quits the transmission
3. notifies the destination of an error
4. permanently quits the transmission

Solution-

- Ethernet uses CSMA / CD as access control method.
- On detecting a collision, the sending station temporarily quits the transmission.
- Transmitting station waits for **Back Off time** and then tries again.

- Thus, Option (B) is correct.

Problem-03:

Ethernet implements _________ service for its operation.

1. connection oriented
2. connection less
3. Both A and B
4. Either A or B

Solution-

REMEMBER

- Connection oriented service involves allocation of the dedicated resources.
- Connection less service does not involve allocation of dedicated resources.
- TCP and Virtual Circuits are connection oriented services.
- IP, Ethernet and Token Ring are connection less services.
- Datagrams are connection less, that is why IP is connection less.

When an Ethernet frame is sent,

- Destination is never expected to reserve the buffer or any other resource for the incoming frame.
- The data is simply dumped at the destination side.
- So, it is connectionless.
- Thus, Option (B) is correct.

Problem-04:

The collision domain of Fast Ethernet is limited to ______ meters.

1. 2.5
2. 25
3. 250
4. 2500

Solution-

- Collision domain defines the number of stations that can get involved in the collision when connected to a LAN.
- In the given question, collision domain refers to maximum distance a LAN can run to detect the collisions.
- Ethernet uses CSMA / CD as access control method.

In CSMA / CD, condition to detect collisions is-

Distance <= (Length x speed) / (2 x bandwidth)

On substituting the values, we get the value of distance.

REMEMBER

- For normal Ethernet, collision domain = 2500 meters.
- For Fast Ethernet, collision domain = 250 meters.
- For Gigabit Ethernet, collision domain = 25 meters.

Thus, Option (C) is correct.

Problem-05:

The efficiency of Ethernet-

1. increases when propagation delay and transmission delay are low
2. increases when propagation delay and transmission delay are high
3. increases when propagation delay is low and transmission delay is high
4. increases when propagation delay is high and transmission delay is low

Solution-

- Efficiency of Ethernet = 1 / (1 + 6.44a) where a = Tp / Tt.
- Thus, Option (C) is correct.

Problem-06:

What is the baud rate of the standard 10 Mbps 802.3 LAN?

1. 20 mega baud
2. 10 mega baud
3. 25 mega baud
4. 40 mega baud

Solution-

LAN uses Manchester Encoding Technique where-

Baud rate = 2 x Bit rate

For 10 Mbps,

Baud rate

= 2 x 10 mega baud

= 20 mega baud

Thus, Option (A) is correct.

Problem-07:

Consider a 10 Mbps Ethernet LAN that has stations attached to a 2.5 km long coaxial cable. Given that the transmission speed is 2.3 x 108 m/sec, the packet size is 128 bytes out of which 30 bytes are overhead, find the effective transmission rate and maximum rate at which the network can send data.

Solution-

Given-

- Bandwidth = 10 Mbps
- Distance = 2.5 km
- Transmission speed = 2.3 x 108 m/sec
- Total packet size = 128 bytes
- Overhead = 30 bytes

Calculating Transmission Delay-

Transmission delay (Tt)

=Packet size / Bandwidth

=128 bytes / 10 Mbps

=(128 x 8 bits) / (10 x 106 bits per sec)

=1024 / 107 sec

=102.4 μsec

Calculating Propagation Delay-

Propagation delay (Tp)

= Distance / Speed

= 2.5 km / (2.3 x 108 m/sec)

= (2.5 x 103 m) / (2.3 x 108 m/sec)

=1.08 x 10-5 sec

=10.8 μsec

Calculating Value of 'a'-

a

=Tp / Tt

=10.8 μsec / 102.4 μsec

= 0.105

Calculating E ciency-

Efficiency(η) =1 / (1 + 6.44 x a) =1 / (1 + 6.44 x 0.105) =1 / 1.67 = 0.59 =59%

Calculating Maximum Rate-

Maximum rate or Throughput

=Efficiency x Bandwidth

=0.59 x 10 Mbps

=5.9 Mbps

Calculating Effective Transmission Rate-

Effective transmission rate

=Throughput x (128-30 / 128)

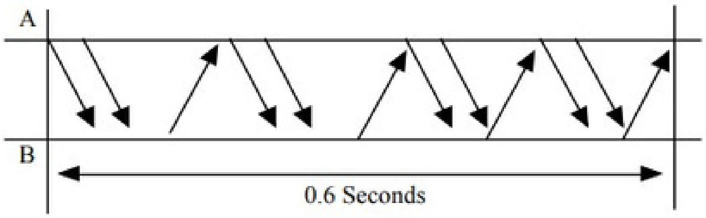
=5.9 Mbps x (98 / 128)

=0.77 x 5.9 Mbps

=4.52 Mbps

Problem-08:

The following frame transition diagram shows an exchange of Ethernet frames between two computers, A and B connected via a 10BT Hub. Each frame sent by computer A contains 1500 B of Ethernet payload data, while each frame sent by computer B contains 40 B of Ethernet payload data. Calculate the average utilization of the media during this exchange.



1. 10%
2. 1.7%
3. 20%
4. 15.2%

Solution-

Calculating Data Sent By Computer A in One Frame-

Given-

- Each frame sent by computer A contains 1500 B of Ethernet payload data.
- This is divided as: 20 bytes of IP Header + 20 bytes of TCP Header + 1460 bytes of data.

So, Total bytes sent by computer A in one frame

=Preamble + SFD + Ethernet Header + Ethernet Payload + CRC

=7 bytes + 1 byte + 14 bytes + 1500 bytes + 4 bytes

=1526 bytes

Calculating Data Sent By Computer A in 0.6 Seconds:

Computer A sends 8 frames in 0.6 seconds.

So, Total bytes sent by computer A in 0.6 seconds

=8 x 1526 bytes

=12208 bytes

Calculating Data Sent By Computer B in One Frame-

Given-

- Each frame sent by computer B contains 40 B of Ethernet payload data.
- This is divided as: 20 bytes of IP Header + 20 bytes of TCP Header + 0 bytes of data.
- Since minimum data in the payload field of Ethernet must 46 bytes. So, extra 6 bytes are padded.

So, Total bytes sent by computer B in one frame

= Preamble + SFD + Ethernet Header + Ethernet Payload + CRC

=7 bytes + 1 byte + 14 bytes + (40 bytes + 6 bytes) + 4 bytes

=72 bytes

Calculating Data Sent By Computer B in 0.6 Seconds-

Computer B sends 4 frames in 0.6 seconds.

So, Total bytes sent by computer B in 0.6 seconds

=4 x 72 bytes

=288 bytes

Calculating Total Data Sent in 0.6 Seconds:

Total data flow that takes place in 0.6 seconds

=Total data sent by computer A in 0.6 seconds + Total data sent by computer B in 0.6 seconds

=12208 bytes + 288 bytes

=12496 bytes

=99968 bits

Calculating Throughput-

Throughput

=Amount of data that flows per second

=99968 bits / 0.6 seconds

=166613.33 bits/sec

Calculating Utilization-

Throughput = Efficiency x Bandwidth

So, Efficiency or Utilization

=Throughput / Bandwidth

=(166613.33 bits per sec) / 10 Mbps

= 0.017

= 1.7%

Thus, Option (B) is correct.

Problem-09:

Ethernet adaptor receives all frames and accepts-

1. Frames addressed to its own address
2. Frames addressed to the multicast or broadcast address
3. Frames if it has been placed in promiscuous mode
4. All of the above

Solution-

In a bus topology Ethernet,

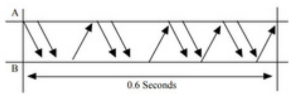
- Ethernet Adaptor enables a computer to access an Ethernet Network.
- If one station sends a frame to other station, then other stations & Ethernet Adaptor also receives that frame.
- But they accept only those frames which are destined for them.
- Ethernet Adaptor accepts all those frames which are addressed to its own address or broadcast address or multicast address (if it is present in that multicast group)
- Network administrator may set the network in promiscuous mode.
- This is done to monitor the activities going on in the network.
- So, if Ethernet Adaptor is set in promiscuous mode, it receives and accepts all the frames.
- Thus, Option (D) is correct.

Next Article- **Types of Switching | Circuit Switching**

Get more notes and other study material of **Computer Networks**.

Watch video lectures by visiting our YouTube channel **LearnVidFun.**

Summary



Article Name	Ethernet in Networking | Practice Problems
Description	Practice Problems based on Ethernet. Ethernet in networking is a LAN technology. Ethernet frame format has several fields. Ethernet frame size range = [64 bytes, 1518 bytes]. Ethernet Header Size = 14 bytes.
Author	Akshay Singhal
Publisher Name	Gate Vidyalay
Publisher Logo	

Liked this article? Share it with your friends and classmates now-

IP Header | IP Fragmentation | Problems

☐ Computer Networks

IP Fragmentation-

Before you go through this article, make sure that you have gone through the previous article on **IP Fragmentation**.

We have discussed-

- IP Fragmentation is a process of dividing the datagram into fragments during its transmission.
- It is performed by intermediary devices at destination side at network layer.

Also Read- IP Header

In this article, we will discuss practice problems based on IP Header and IP Fragmentation.

PRACTICE PROBLEMS BASED ON IP HEADER AND IP FRAGMENTATION-

Problem-01:

The intermediate routers between source and destination need the following information in IP header-

1. Version
2. Protocol
3. Identification Number
4. Source IP Address

Solution-

Option-A:

- **Version** field indicates the version of IP used.
- This information is required to process the packet appropriately based on its version.

Option-B:

- **Protocol** field indicates the next level protocol.
- This information is required by the router to accept or discard the packet if its buffer is full.
- Based on the priority, router takes its decision.

Option-C:

- **Identification number** field identifies the fragments of the same datagram.
- This information is required while re-assembling the datagram fragments.

Option-D:

- **Source IP Address** field indicates the **IP Address** of the source.
- This information is required by the router to send ICMP packet to the source.
- ICMP packet informs the source that its packet has been discarded.

Thus, All these fields are required in the IP Header.

Problem-02:

Fragmentation of a datagram is needed in-

1. Datagram circuit only
2. Virtual circuit only
3. Both (A) and (B)
4. None

Solution-

- Each network has its Maximum Transmission Unit (MTU).
- If the size of data packet is greater than MTU, then it will have divided into fragments to transmit it through the network.
- So, fragmentation may be required in datagram circuits as well as virtual circuits.
- Thus, Option (C) is correct.

Problem-03:

What are all the fields required from IP header to allow the destination to perform reassembly of fragments?

1. Identification, MF, Offset, Header length and Total length
2. MF, Offset and Destination IP
3. MF, Datagram length, Source IP
4. MF, Options and Offset

Solution-

Clearly, Option (A) is correct.

Problem-04:

The checksum in IP must be recomputed at every router because of change in ____ fields.

1. TTL, Options, Identification Number, Offset
2. TTL, Options, Datagram Length, Offset
3. TTL, Options, Data, Offset
4. TTL, Header Length, Offset, ToS

Solution-

Clearly, Option (B) is correct.

Problem-05:

Ifthe value available in "fragment offset" field of IP header is 100, then the number of bytes ahead of this fragment is ___ ?

1. 100 B
2. 400 B
3. 800 B
4. 200 B

Solution-

- Fragment offset field use a scaling factor of 8.
- If Fragment offset field value = 100, then fragment offset = 8 x 100 = 800.
- It suggests 800 bytes of data is ahead of this fragment.
- Thus, Option (C) is correct.

Problem-06:

When the source does not trust the routers to route properly or source wishes to make sure that the packet does not stray from specified path, what options can be used?

1. Loose source routing
2. Trace route
3. Strict source routing

4. Internet Time Stamp

Solution-

Clearly, Option (C) is correct.

Problem-07:

The checksum computation in IP header includes-

1. IP header only
2. IP header and data
3. IP header and Pseudo header
4. None

Solution-

- Checksum computation in IP header includes IP header only.
- Errors in the data field are handled by the encapsulated protocol.
- Thus, Option (A) is correct.

Problem-08:

Suppose a router receives an IP packet containing 600 data bytes and has to forward the packet to a network with maximum transmission unit of 200 bytes. Assume that IP header is 20 bytes long. What are fragment offset values for divided packets?

1. 22, 44, 66, 88
2. 0, 22, 44
3. 0, 22, 44, 66
4. 22, 44, 66

Solution-

Given-

- MTU size of the destination network = 200 bytes
- IP header length = 20

Now,

- Maximum amount of data that can be sent in one fragment = 200 – 20 = 180 bytes.
- Amount of data sent in a fragment must be a multiple of 8.
- So, maximum data sent that can be in one fragment = 176 bytes.

Thus, 4 fragments are created-

- 1st fragment contains 176 bytes of data.

- 2nd fragment contains 176 bytes of data.
- 3rd fragment contains 176 bytes of data.
- 4th fragment contains 72 bytes of data

So,

- Fragment offset value for 1st fragment = 0
- Fragment offset value for 2nd fragment = 176 / 8 = 22
- Fragment offset value for 3rd fragment = (176+176) / 8 = 44
- Fragment offset value for 4th fragment = (176 + 176 + 176) / 8 = 66

Thus, Option (C) is correct.

To watch video solution and practice other problems,

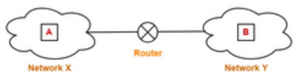
[Watch this Video Lecture]

Next Article- [Transmission Control Protocol | TCP]

Get more notes and other study material of **Computer Networks**.

Watch video lectures by visiting our YouTube channel **LearnVidFun.**

Summary



Article Name	IP Header | IP Fragmentation | Problems
Description	Practice Problems based on IP Header and IP Fragmentation. IPv4 Header contains information required during the data packet transmission. IP Fragmentation is a process of dividing datagram into fragments.
Author	Akshay Singhal
Publisher Name	Gate Vidyalay
Publisher Logo	

Liked this article? Share it with your friends and classmates now-

Transmission Control Protocol | Practice Problems

 Computer Networks

PRACTICE PROBLEMS BASED ON TRANSMISSION CONTROL PROTOCOL-

Problem-01:

How many TCP connections can be opened between two ports?

1. Multiple
2. Single
3. Zero
4. None

Solution-

Option (B) is correct.

Problem-02:

TCP protects itself from miss delivery by IP with the help of-

1. Source IP Address in IP header
2. Destination IP Address in IP header
3. Pseudo header
4. Source port and Destination port

Solution-

Option (C) is correct.

Problem-03:

What addressing system has topological significance?

1. Logical or Network Address
2. LAN or Physical Address
3. Port Addressing System
4. Multicast Addressing System

Solution-

Option (A) is correct.

Problem-04:

IfWAN link is 2 Mbps and RTT between source and destination is 300 msec, what would be the optimal TCP window size needed to fully utilize the line?

1. 60,000 bits
2. 75,000 bytes
3. 75,000 bits
4. 60,000 bytes

Solution-

Given-

- Bandwidth = 2 Mbps
- RTT = 300 msec

Optimal TCP Window Size-

Optimal TCP window size

=Maximum amount of data that can be sent in 1 RTT

=2 Mbps x 300 msec

=600 x 103 bits

=60,0000 bits

=75,000 bytes

Thus, Option (B) is correct.

Problem-05:

Suppose host A is sending a large file to host B over a TCP connection. The two end hosts are 10 msec apart (20 msec RTT) connected by a 1 Gbps link. Assume that they are using a packet size of 1000 bytes to transmit the file. For simplicity, ignore ack packets. At least how big would the window size (in packets) have to be for the channel utilization to be greater than 80%?

1. 1000
2. 1500
3. 2000
4. 2500

Solution-

Given-

- RTT = 20 msec
- Bandwidth = 1 Gbps
- Packet size = 1000 bytes
- Efficiency >= 80%

Window Size For 100% E ciency- _

For 100% efficiency,

Window size

=Maximum number of bits that can be transmitted in 1 RTT

=1 Gbps x 20 msec

=(109 bits per sec) x 20 x 10-3 sec

=20 x 106 bits

=2 x 107 bits

Window Size For 80% E ciency- _

For 80% efficiency,

Window size

=0.8 x 2 x 107 bits

=1.6 x 107 bits

Interms of packets,

Window size

=1.6 x 107 bits / Packet size

=1.6 x 107 bits / (1000 x 8 bits)

=0.2 x 104 packets

=2000 packets

Thus, Option (C) is correct.

Problem-06:

ATCP machine is sending windows of 65535 B over a 1 Gbps channel that has a 10 msec one way delay.

1. What is the maximum throughput achievable?

2. What is the line efficiency?

Solution-

Given-

- Window size = 65535 bytes
- Bandwidth = 1 Gbps
- One way delay = 10 msec

Method-01:

Maximum amount of data that can be sent in 1 RTT

=1 Gbps x (2 x 10 msec)

=(109 bits per sec) x 20 x 10-3 sec

=20 x 106 bits

=25 x 105 bytes

Amount of data that is actually being sent in 1 RTT = 65535 bytes

Thus,

Line Efficiency(η)

=Amount of data being sent in 1 RTT / Maximum amount of data that can be sent in 1 RTT

=65535 bytes / 25 x 105 bytes

= 0.026214

= 2.62%

Now,

Maximum Achievable Throughput

=Efficiency x Bandwidth

=0.0262 x 1 Gbps

=26.214 Mbps

Method-02:

Maximum Achievable Throughput

= Number of bits sent per second

= 65535 B / 20 msec

= (65535 x 8 bits) / (20 x 10-3 sec)

= 26.214 Mbps

Now,

Line Efficiency

=Throughput / Bandwidth

=26.214 Mbps / 1 Gbps

=26.214 x 10-3

= 0.026214

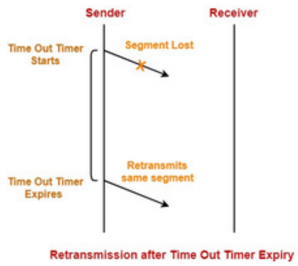
= 2.62%

Next Article- TCP Congestion Control

Get more notes and other study material of **Computer Networks**.

Watch video lectures by visiting our YouTube channel **LearnVidFun.**

Summary



Article Name	Transmission Control Protocol | Practice Problems
Description	Practice Problems based on Transmission Control Protocol. TCP Protocol is a transport layer protocol. TCP header format specifies various fields required for transmission. TCP congestion control policy is used for handling congestion.
Author	Akshay Singhal
Publisher Name	Gate Vidyalay
Publisher Logo	GateVidyalay A temple of learning

Liked this article? Share it with your friends and classmates now-

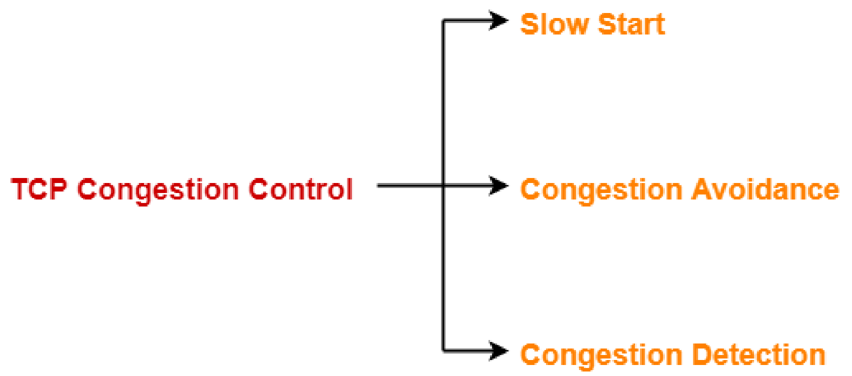
TCP Congestion Control | Practice Problems

 Computer Networks

TCP Congestion Control-

Before you go through this article, make sure that you have gone through the previous article on **TCP Congestion Control**.

TCP congestion control policy consists of following three phases-



1. Slow Start
2. Congestion Avoidance
3. Congestion Detection

In this article, we will discuss practice problems on TCP Congestion Control.

PRACTICE PROBLEMS BASED ON TCP CONGESTION CONTROL-

Problem-01:

The growth of congestion window takes place-

1. Infinitely
2. Up to Threshold
3. Up to the size of receiver's window
4. Up to timeout

Solution-

Option (C) is correct.

Problem-02:

Consider the effect of using slow start on a line with a 10 msec RTT and no congestion. The receiver window is 24 KB and the maximum segment size is 2 KB. How long does it take before the first full window can be sent?

Solution-

Given-

- Receiver window size = 24 KB
- Maximum Segment Size = 2 KB
- RTT = 10 msec

Receiver Window Size-

Receiver window size in terms of MSS

= Receiver window size / Size of 1 MSS

=24 KB / 2 KB

=12 MSS

Slow Start Threshold-

Slow start Threshold

=Receiver window size / 2

=12 MSS / 2

=6 MSS

Slow Start Phase-

- Window size at the start of 1st transmission = 1 MSS
- Window size at the start of 2nd transmission = 2 MSS
- Window size at the start of 3rd transmission = 4 MSS
- Window size at the start of 4th transmission = 6 MSS

Since the threshold is reached, so it marks the end of slow start phase.

Now, congestion avoidance phase begins.

Congestion Avoidance Phase-

- Window size at the start of 5th transmission = 7 MSS
- Window size at the start of 6th transmission = 8 MSS
- Window size at the start of 7th transmission = 9 MSS
- Window size at the start of 8th transmission = 10 MSS
- Window size at the start of 9th transmission = 11 MSS
- Window size at the start of 10th transmission = 12 MSS

From here,

- Window size at the end of 9th transmission or at the start of 10th transmission is 12 MSS.
- Thus, 9 RTT's will be taken before the first full window can be sent.

So,

Time taken before the first full window is sent

=9 RTT's

=9 x 10 msec

=90 msec

Problem-03:

Consider an instance of TCP's Additive Increase Multiplicative Decrease (AIMD) algorithm where the window size at the start of slow start phase is 2 MSS and the threshold at the start of first transmission is 8 MSS. Assume that a time out occurs during the fifth transmission. Find the congestion window size at the end of tenth transmission.

1. 8 MSS
2. 14 MSS
3. 7 MSS
4. 12 MSS

Solution-

Given-

- Window size at the start of slow start phase = 2 MSS
- Threshold at the start of first transmission = 8 MSS
- Time out occurs during 5th transmission

Slow Start Phase-

- Window size at the start of 1^{st} transmission = 2 MSS
- Window size at the start of 2^{nd} transmission = 4 MSS
- Window size at the start of 3^{rd} transmission = 8 MSS

Since the threshold is reached, so it marks the end of slow start phase.

Now, congestion avoidance phase begins.

Congestion Avoidance Phase-

- Window size at the start of 4^{th} transmission = 9 MSS
- Window size at the start of 5^{th} transmission = 10 MSS

Itis given that time out occurs during 5th transmission.

TCP reacts by-

- Setting the slow start threshold to half of the current congestion window size.
- Decreasing the congestion window size to 2 MSS (Given value is used).
- Resuming the slow start phase.

So now,

- Slow start threshold = 10 MSS / 2 = 5 MSS
- Congestion window size = 2 MSS

Slow Start Phase-

- Window size at the start of 6^{th} transmission = 2 MSS
- Window size at the start of 7^{th} transmission = 4 MSS
- Window size at the start of 8^{th} transmission = 5 MSS

Since the threshold is reached, so it marks the end of slow start phase.

Now, congestion avoidance phase begins.

Congestion Avoidance Phase-

- Window size at the start of 9th transmission = 6 MSS
- Window size at the start of 10th transmission = 7 MSS
- Window size at the start of 11th transmission = 8 MSS

From here,

Window size at the end of 10th transmission

=Window size at the start of 11th transmission

=8 MSS

Thus, Option (A) is correct.

Problem-04:

Suppose that the TCP congestion window is set to 18 KB and a time out occurs. How big will the window be if the next four transmission bursts are all successful? Assume that the MSS is 1 KB.

Solution-

Congestion Window Size-

Congestion window size in terms of MSS

=18 KB / Size of 1 MSS

=18 KB / 1 KB

=18 MSS

Reaction Of TCP On Time Out-

TCP reacts by-

- Setting the slow start threshold to half of the current congestion window size.
- Decreasing the congestion window size to 1 MSS.
- Resuming the slow start phase.

So now,

- Slow start threshold = 18 MSS / 2 = 9 MSS
- Congestion window size = 1 MSS

Slow Start Phase-

- Window size at the start of 1^{st} transmission = 1 MSS
- Window size at the start of 2^{nd} transmission = 2 MSS
- Window size at the start of 3^{rd} transmission = 4 MSS
- Window size at the start of 4^{th} transmission = 8 MSS
- Window size at the start of 5^{th} transmission = 9 MSS

Thus, after 4 successful transmissions, window size will be 9 MSS or 9 KB.

Problem-05:

On a TCP connection, current congestion window size is 4 KB. The window advertised by the receiver is 6 KB. The last byte sent by the sender is 10240 and the last byte acknowledged by the receiver is 8192.

Par t-01:

The current window size at the sender is ____.

1. 2048 B
2. 4096 B
3. 6144 B
4. 8192 B

Par t-02:

The amount of free space in the sender window is ____.

1. 2048 B
2. 4096 B
3. 6144 B
4. 8192 B

Solution-

Par t-01:

Sender window size

= min (Congestion window size, Receiver window size)

= min(4KB , 6KB)

= 4 KB

= 4096 B

Thus, Option (B) is correct.

Par t-02:

Given-

- Last byte acknowledged by the receiver = 8192
- Last byte sent by the sender = 10240

From here,

- It means bytes from 8193 to 10240 are still present in the sender's window.
- These bytes are waiting for their acknowledgement.
- Total bytes present in sender's window = 10240 – 8193 + 1 = 2048 bytes.

From here,

Amount of free space in sender's window currently

=4096 bytes – 2048 bytes

=2048 bytes

This indicates that half of the sender's window is currently empty.

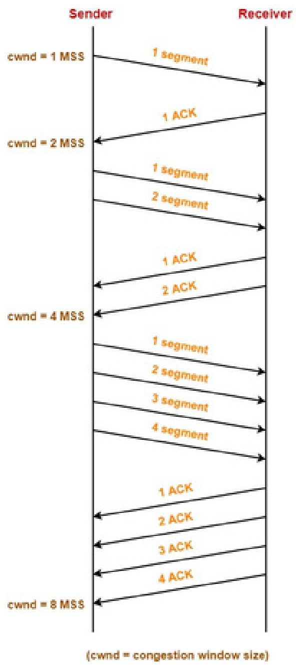
Thus, Option (A) is correct.

Next Article- [TCP Timers]

Get more notes and other study material of **Computer Networks**.

Watch video lectures by visiting our YouTube channel **LearnVidFun.**

Summary



Article Name	TCP Congestion Control | Practice Problems
Description	Practice Problems on TCP Congestion Control. TCP Congestion Control is meant for handling Congestion in Network. TCP Congestion Control Policy consists of three phases- Slow start phase, Congestion Avoidance Phase, Congestion Detection Phase.
Author	Akshay Singhal
Publisher Name	Gate Vidyalay
Publisher Logo	GateVidyalay A temple of learning

Liked this article? Share it with your friends and classmates now-