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Question #1	
a) Flow control is the management of data flow	
between computers or devices or between nodes	
in a retwork so that the data can be handled	
at an efficient pace.	
While congestion control is a method used for	
monitoring the process of regulating the total	
amount of data entering the network so as to	
keep traffic levels at an acceptable value.	
Flow control controls the traffic from a	
particular sender to a receiver while congestion	
control, controls the traffic entering the network.	
convices ou ragine estates	
b) Congestion & Flow control both are only used	
for connection-oriented networks. Because both of	
them wants to ensure that no data is being lost.	
Meanwhile connection-less doesn't care about	
1 to being lot in Connection oriented Flow	
data being lost. In Connection-oriented, Flow control uses the following techniques.	
control uses the foctowing activities.	
Stop-and-wait technique to a selective repeat	
Selective repeat	
1	
While congestion Control have one technique.	
When there is no acknowledgment received it will	
send few packets and exponentially increase the	
While congestion Control have one technique. When there is no acknowledgment received it will send few packets and exponentially increase the packets after time. Then when acknowledgment	

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is received from some it will linearly grow.	
And when no more packets are being accepted,	
then it will send constant number of packets.	
Will still the still state of the state of t	
c) Both are different. Flow control is used	
when only receiver is having problems	
with data acknoledging Congestion control	
is used when network is having problem	
to transmit so much data. Flow control	
is used in data link layer and congestion	
control is used in network and transport	N P
layer.	1 1 1 1 1 1
Question #2	Y 2 2 2 2 2 2 2 2 2
R_1	
Pouter in Parter in the Parter	7-
A B B	1
Lange level best who Ober which win hat Fire William Ish	
As we know that I want to the second of the	2
transmission time = Length of Message	
transmission time = Length of Message Transmission Rate	
	. 1
\overline{R} , \overline{R}	
	3

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Also we know that end-to-end delay depends	
upon speed.	
	hate a second se
Let suppose the speed from A to Router is So and similarly the speed from Router	
Si and similarly the speed from Kouler	
to Bis So. And let suppose the distance from	2
A to Router is & r, and distance from	- 1
Router to B is r ₂ so.	
- Commence of the second of th	
Propagation delay = r. + r2 S. S2	
S_1 S_2	de an a Distanti
So,	
end-to-end delay = L + L + r, + r.	
end-to-end delay = 1 + 1 + r, + r2. R, R2 S, S2	
France in less a thick	
Question #3	
and acoety anneal depend in killing of	T-A
Given data	
The same of the sa	
R ₁ = 1200 Kbs	14,0
R ₂ = 2 Mbps	
R ₃ = 5 Mbps	
Ry = 20 Mbps	
Rs = 5 Mbps.	
As we see from the above given data	
the minimum bandwidth is of R, i.e 1200kbs	(1.2 Mbp
Even though every other bandwidth is higher	
	T.

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which can be restricted by R., so the Lotal throughput will be 1.2 Mbps.	
total throughout will be 12 M/s	
to the tribungapue to the Be 1.21 pps.	1
O. 1: . F	
Question # 5	
Given data:	
Frames in one minute = 10000	
Frequential delay = 1 + +	
Frames in one second = 10000 = 60 sec	
= sec = 10000	
60	
2 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
So Frames in I sec = 166.6	
Suction#3	
Bits carried by each frame = 5000 bits	
atob meno	
1 frame = 5000 bits	
166.6 frames = 166.6 × 5000 math C. 3	l l
= 830,000 bits	
1 P. 2 20 Maps	to the second
So;	
Total throughput = 830 kbps.	
As ice see from the above given axia	
we there every effect bondwidth is higher	
<u> 보다 게 되고 하는 사람들이 있다. 사람이 없는 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은 사람들은</u>	

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Question #6	Liviano de la	lara .	
Wiestion # 0			
	R		
	$ \times$ $-$		
Z			
A		. B	
Possible del	lays are:	4.00.78	nto l
	2h 1,35 + 1	u i d	
Transmission d	elay = Len of m Bandwid	isq and parantas	
	Bandwid	the state in the	347
	cilian	into the com	<i>y</i> .
Propagation del	lay = Distance		
V	Speed	1.00 = S	D M
Delays in Ro	uter:	the andre	
0 11	0		
Queueing del Process delay	lay		
Process deva	y		2 22 1
Total delay = I	Imperiision delau	+ Propagation dela	1_
10 the corring =	Quenina delan+	+ Propagation delay Processing delay:	
T Charles To The			
Question # 7			
It depends or	n the scenario	that what we	
want to ach	viewe. If we was	that what we it high speed will be used.	
performance, U	ren datagram i	vill be used.	f
, v	U		

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we want to get complete information, VC will be used:	
VC scenario: If we are sending mail then	
VC scenario: If we are sending mail then we don't want to lose any data so VC will be used.	
Datagram: If we are on a video call or watching some video, it is fine to lose some data but we want to have a high speed connection.	
Question #8 5392	
Information is not provided completely!	
Percent delan	
Tell-de minor dela - dela maninaria dela - T	2. W
Curition = 7	
10 started last or cares and as expanded at	
H. bast d'illi mosquista de la company	