	Date II va do do
	Expt. No. OG Page No. 18
-	ATM OF THE EXPERIMENT :>
	Consider a class C network - 200. 1.2.0. Coente 3 vibrets
#1 745 - 2	for 100,30 and 4 hosts. Also specify the network address.
	subject mark and disected broadcast address for each subject
41-62	The TRANSPORT CONTRACTOR OF THE PROPERTY OF THE PROPERTY OF
	DETERMINATION OF REQUIRED SUBNET STEES ?
7	We have to create ? subject & from class C network
11 , 6	200.1.2.0 that can accompodate, 100,30 and 4 hosts.
7	It can be done by performing travable Length Subort Masking
Ti de la companya de	
7	Subnet 1 3
	100 hosts
	So, it needs at least 37-2=126 hosts (so, we use/21)
7	Subnet 2:>
1	30 hosts
	Su, it needs at last 25-2= 30 hosts (so, we use 127)
)	Subnet 3:5
The state of the s	4 hosts
1 .	Sg & needs at least 23-2=6 hosts (So, we use 129).
and the second	Computation of Subnet address, Subnet mask and directed
我	broadcast address
10	
*	For subject 1 we need 186 hosts . So, the Past octave
ii.	con the second of the networking and
E. Alexander	rest 7 for host as 27=126 . So, too The subtree I
	Teacher's Signature

AT.	BLE 6.1			
No.	Network Address	Subnet Mask	Usable IP Range.	Broadcast Address
1	200.1.2.0	255.255.256.128 (125)	200-1-2-1-200-1-2-126	2001-2-12
2	200-1-2-128	2 22.522.522.554 (127)	200.1.2.129 — 200.1.2.158	200.1.2.159
3.	an.1.2.160	855·522.522·548 (124)	200.1.2.161-200.1.2.166	200-1.2.167
E.	11 1 4 1 1		The Dark And Parks 19	W 576

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1 de Martin

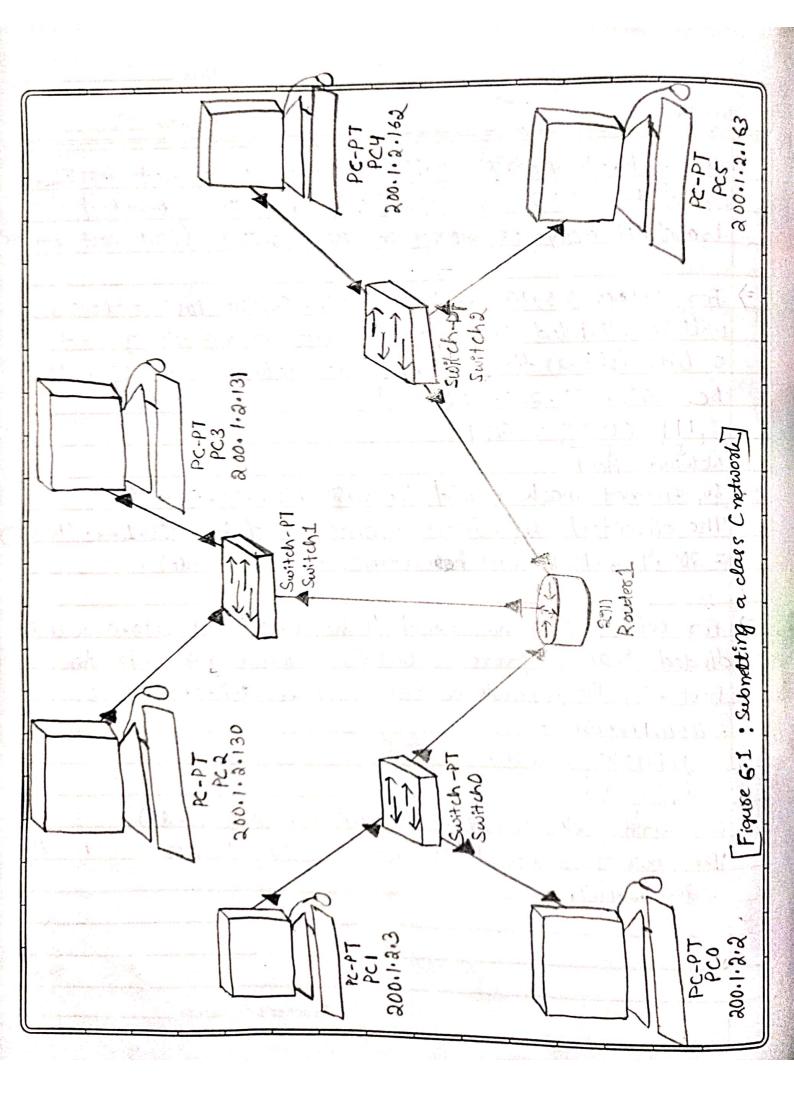
- 200 Ethio 1811 han till

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For Subnet 2: We need 30 hosts - So, the last octave will be 255.255.255.128 (125) for network address will be 255.255.255.128 (125) and the directed broadcast address would be 200.1.2.127 (Last host address will be divided in a parets, 3 bits for networking and 5 bits (25-32) for host. So, the network address will be 255.255.255.128. 11100000 = 224. Network Host So, subnet mash would be 255.255.224 (127)		Date
the Network Address will be 200.1.2.0, subject mask would be 255.255.255.128 (/25) and the directed broadcast address would be 200.1.2.127 (Last host address will be olivated in a ports, 3 bits for retrocking and 5 bits (25-32) for host. so, the network address will be 255.255.255.128. 111,00000 = 224. The directed broadcast address would be 200.2.2.(127t-200.1.2.159) (Last host address of this subject). =) For subject 3: We need 4 hosts. So, last octave will be divided into 2 parts, 5 bits for retrocking 4 3 bits for host. So, the retrock address will be 250.1.2.(159+1) = 200.1.2.160.	E	xpt. No. ———
5 bits (25:32) for host. So, the network address will be 255.255.255.128. 11100000 = 224 Network Host So, subnet mask would be 255.255.255.248 (127+ = 200.1.2.160. The directed breadcast address will be 200.1.2. (159+1) = 200.1.2.160. Subnet mask would be 255.255.255.248 (129) The directed breadcast address will be 200.1.2. (159+8)		the Network Address will 1 and
network Host So, subnet mask would be 255.255.224 (127) The directed broadcast address would be 200.1.2. (127+ = 200.1.2.159 (last host address of this subnet). =) For subnet 3:> We need 4 hosts. So, last octave will be divided into 2 parts, 5 bits for networking & 3 bits for host. So, the network address will be 200.1.2. (159+1) = 200.1.2.160. 1111000 = 248. Subnet mask would be 255.255.248 (129) The directed broadcast address would be 200.1.2. (159+8)		5 bits (25:32) for host. So, the network address will be 255.255.255.128.
chrided into a parts, 5 bits for networking & 3 bits for host - So, the network address will be 200.1.2. (159+1) = 200.1.2.160. 11111000 = 248. Subnitting itst So, Subnet mask would be 255.255.255.248 (129) The directed boundcast address would be 200.1.2. (159+8)		retwork Host So, subnet mash would be 355.255.224 (127) The directed broadcast address would be 200.7.2. (127)
The directed booadcast address would be 200.1.2. (15978)		host - So, the retwork address will be 200.1.2. (159+1) = 200.1.2.160. 1111000 = 248.
		So, Subject mask would be 255.255.255.248 (129) The directed boordcast address would be 200.1.2. (15978)

Teacher's Signature



Page No. 20 Expt. No. IMPLEMENTATION; DEVICES :> The following devices are used in the experiment for generating 8 subnets as per our require. + PCO, PCI, PC2, PC3, PCY and PC5 avove personal computers which are connected in twos with 3 different switchs. > SwitchO, Switch and Switch are 3 different PT-switches. + One 2911 Routed is used for network connection among the different subnets. ARCHITECTURE:> - The network structure involves connecting a PCS with one switch through copper straight-through wire as shown in the figure 6.1. -> Like this-PCD, PCI are connected with substituto - PC2, PC3 are connected with switch! -PC4, PC5 are connected with Susticha 7 AU the those switches over connected with the 2911 Routes through the 3 Gigast Ethornet poots. 3 Switch is connected with Gigalit Whernet 0/0 of Router1 - Switch is connected with Gigabit Elhernet 0/2 of Routers of Switcha is connected with Gigabit Ethornetola of Bruteal. -) All the 3 PT-switch are connected with the 2911 Router through Copper-straight-through wire as shown in the figure 6.1. Teacher's Signature _

Page No. 21 Expt. No. CONFIGURATION OF NETWORK -) The IP address of PCD is set to 200.1:2.2, Subnet Mask cet to 255.255.255.128 and the default gateway is set to 200. 1.2.1. - The IP address of PCI is set to 200.1.2.3, subjet mask set to 251.255.255.128 and the default gateway set to 200.1-2.1. -) The IP address of PCZ is cet to 200.1.2.130, subnet Mark is set to 255.255.255.224 and the default gateury et to 200.1.2.129 -) The IP address of PC3 is set to an :1.2.131, subout Maste is set to 255.255.255.224 and the default gate way is set to 200.1.2.129 - The IP address of PCM is set to 200.1.2.162 cubact Mask is set to 255.255.255. 248 and the defeult gateway is set to 200.1.2.161. -> The IP address of PCS is set to 200.1.2.163, subnet mask is set to 255.255.255.248 and the default gateway is set to 200.1.2.161 -) The IP address of GigabitEthronet 0/0 post of Router I as set to 200.1.2.1 and subnet mask is set to 255.255.128 and word on. > The IP address of Gigabit Ethornef 0/1 port of Pouters is set to 200.1.2.129 and subject Mark is set to 255.255.255.254 and turned on. 7 The SP address of Gigabitthernit 0/2 post of Routers 1 is set to 200.1.2.161 and subject mask is set to 200.255.255. 24 e and trooped on. Teacher's Signature _

Output 6.1

>ping 200.1.2.163

pinging 200.1.2.163 with 32 bytes of data:

Reply from 200.1.2.163: bytes = 32 time < 1ms TT L=127

Reply from 200.1.2.163: bytes = 32 time <1me TTL=127

Reply from a w. 1.2.163: bytes = 32 time=1ms TTL=127

Reply from 200.1.2.163: bytes = 32 time = 1 ms TTL = 127

Ping statistics for 200.1.2.163:

Packets: Sent = 4, Received = 4, Lust = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0 ms, Maximum = 1ms, Average = oms

Output 6.2

7ping 200.1.2.131

Pinging 200.1.2.131 with 32 bytes of data:

Reply from 200.1.2.131: bytes=32 time=3ms TTL=128

Reply from 200.1.2.131: bytes=32 time=8ms TTL=128

Reply from aco. 1.2. 131: bytes = 32 time = 1ms TTL= 128

Reply from 200.1.2.131: bytes = 32 time = 6mg 77L=128

Ping statistice for 200.1.2.131:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round in times in milli-seconds:

Minimum = Ims, Maximum = 8 ms, Avorage = 4 ms

Date _____

Expt. No Page No22	
OBSERVATIONS	
-) The systems were connected as per the architecture shown	7
in the figure 6.1.	
-> The connection between different RS was verified by	
using PDU packet transferred from one PC to another PC in	
the same subject and ithe different subject.	-
-> Then using the command prompt of the PCs connection	+ '
status is checked whether it is connected or not.	
-) At pro command prompt ?+ is checked the connection	
with PC5 by woitting the command is	1
pring 200.1.2.163 then it is confromed of the 0%	
las of the 4 packet cent to P(3. (Output 6.1)	4
> like this "DC2 command prompt it is checked the connection	7
with DC3 by the command >> ping 200.1.2.131 and it	1
is confirmed the 0% loss. (Output 6.2)	
> like this other connections are also confirmed.	16
	!
CONCLUSION:	
From the above experiment we are able to create 3 subnets ef	clied
for accomposating 100,30 and 4 hosts using switches and routers.	
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	1
	1
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