Semester 5th | Practical Assignment | Computer Networks (2301CS501)

Date: 13/9/2024

Lab Practical #09:

Study of IP Addressing and sub-netting.

Practical Assignment #09:

- 1. Find default subnet marks, network bits, host bits, hosts per subnet, no of subnets, subnet number, 1st valid IP address, last valid IP address, and broadcast address.
 - 8.1.4.5/16

	DATE
Ans:I	->)
1-	7) 8.1.4.5/16
—— <u>—</u>))	Class A
	Default Subnet Mask: 255.0.0.0
	Bit borrowed: 8
-7)	Network bits:16
->)	hots bits: 16
->)	Subnet Mask: 255.255, 0.0
-7)	Tho. Of shorter 2
-77	Hosts Persubject = 26+2 Hann And
	= 65,34
-7)	Subnet number: IP subnet mask
	= 8.1.0.0
<i>ج</i>)	Ist valid IP: 8.1.0.)
-27	Last varid 79: 8.1.255.25h
-2)	Broad Cast Address: 8.1.255.255.

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130.4.102.1/24 ii.

2 130.4.102.1/2h
->) class:B
->> Defall subject mask: 255.255.0.0
5) 151t borrowed: 8, network bits: 26
Hosts bits: 8
->) Shbnet mask: 255. 255. 255.0
->> No. 0F Subnets: 28 = 256
->> Hots Per subjet: 28-2 =254
-> Subnet no. : IP & subnet Mask : 130 h. 1020
>> 15t Valid 7P: 130- h.102.1
->> Last varid IP: 130.4.102.754
->> Broad cast Address = 130. 4.102.255.

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iii. 199.1.1.1/24

	PAGE NO.
	DATE:
3-7)	139.1.1.1/24
	103.1.1.1/24
->)	Class:c
->)	Perault subjet Mask: 255.255.755.0
-3)	bit borrowed :0
	Actwork bits:8
-22	hotts Persubaet: 28-2:254
	Subjet Mask: 755.255.2550
	No. of subjet: 2°=1
	Sybnet number: IP & subnet mask =199.1.1.0
	st valid Tp: 199.1.1.0
	ast valid 78: 189.1.1.254
	Broad cast Adress: 139.1.1.255
	101831

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130.4.102.1/22 iv.

4-5)	130. h.102.1/22
-7)	class:B
~))	Defallt subnet mask: 255.755.0.0
-5)	bit borrowed-6
(5)	Wetwork bits: 22
->)	Mosts bits: 10
->)	Subnet mask: 255, 255, 252.6
	No OF Subnet: 25 764
-7)	Kosts Per Subnet: 2002 = 1022
-D)	subjet number : IP & Subjet Mask
	= 130. 4.100.D
7)	75t valid TP: 130.4.100.
757)	Last Valid IP: 130.4.103.254
3)	Broad (ast Address: 130.4.103.255

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199.1.1.100/27 ٧.

433	DAY
5-7)	199.1.1.100/27
-))	class:
	Default subnet mask: 255. 755. 7550
	network bits: 27
	hosts bits :5
	Subnet Mask: 255. 255. 255.254
	No. OF Subnet: 23=8 Mots Per Subnet = 25-2
	230
- 11	Subnet number: If & Subnet mask: 193.1.1.36
	1st valid 19:139.1.1.37
	last valid IP: 189.1.1.726
	Broad (ast 1P: 199.1.1.127.
	According to the second
191	0.0 25.79
	2 05 125 25 25 25 221 221
	IN THE NAME OF THE OWNER, WHEN THE PARTY OF THE OWNER, WHEN TH
	NAME OF THE OWNER OWNER OF THE OWNER OWNE
THE PERSON NAMED IN	

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2. A host in a class C network has been assigned an IP address 192.168.17.9. Find the number of addresses in the block, the first address, and the last address.

	2 . O. 30/49
Ans:2-7)	
~>>	Here, class: c So, host bit=8
(<->)	No. of address in the block: 28=256 Cwith Valid host): (28-2) = 256
	2 st Address = 192.168.17.0 Last Address = 192.168.17.255

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3. An address in a block is given as 185.28.17.9. Find the number of addresses in the block, the first address, and the last address.

	050
Ans:3->)	2 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
=>	Here class: B
	So, nosts bit: 16
	A Line and the second s
->>	No. OF Address in the
	block: 2 = 65,536
3	will valid hosts: 2 -2 - more
	1. St allocs! PS. 28.0.0
7)	Last address: 185.28.255.255.

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4. A block of addresses is granted to a small organization. We know that one of the addresses is 205.16.37.39/28. What is the first address, last address, number of addresses in a block.

Ans: 4->)	
>)	Here, Class: C
	bitborrowed : h
	So, host bitch
~))	No. OF addresses in the block: 2h=16
7)	With Valid host: 2h-2 = 14
	1st address: 205. 16.37.92
-7)	last address: 205. 16.37.47



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5. Subnet the IP address 216.21.5.0 into 30 hosts in each subnet. Find Class, Default Mask, Bit Borrowed, New subnet mask, No. of Hosts & Subnet, Network Ranges (Subnets).

A75:5-1)	
=>	Here class: C
	DeFault Mask : 255. 255. 755. 6
	Here, 30 hosts in each subnet means (25-2)
	So host bit=5
	Network bit = 27
	So, IP=216.21.5.0/27
	bit Network =3
	New subblet: 255. 255. 255. 255
	NO. OF SUBJELS: 23=8
	No . OF hosts Persynnet = 25-2=30
	Network Ronges (Subnets):
	S1: 216.21.5.0 to 216.21.5.31
	52: 76. 21.5. 32 to 216. 21.5.63
	and so on 48 to 8 subnet.
Section 1 to the second section 1 to 1	



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6. Subnet the IP address 192.10.20.0 into 52 hosts in each subnet. Find Class, Default Mask, Bit Borrowed, New subnet mask, No. of Hosts & Subnet, Network Ranges (Subnets)

(Subiti	Cisj
Ans: 6-50	
	here class: c
	Detaille subnet mask : 255, 755, 755.0
	here, 52 hosts in each subnet means
	52 < (26-2) > 52. < 62
	So, Mosts bits =6
	bit borrowed =2
7172113	Network bits = 26
	So, IP will be 192.10.70.476
	Now Supply: 255 255. 255. 192
	lal = sid and sad sh
	Wo OF Valid hosts Per sumet: 26-2 262
->	Network Ranges (subrets):
	(through the same than the sam
	G= 102.10.70.0 to 192.10.20.63
	S1= 182.10.20.64 to 192.10.20.127
	S2= (32. (8.70. 64 to 5)
	A LANGAL MARKET
	and so on ulto 4 subnet.
	12 7212 11 11 11 11