

CSE 1004 Network and Communication

CLOSED ASSESSMENT

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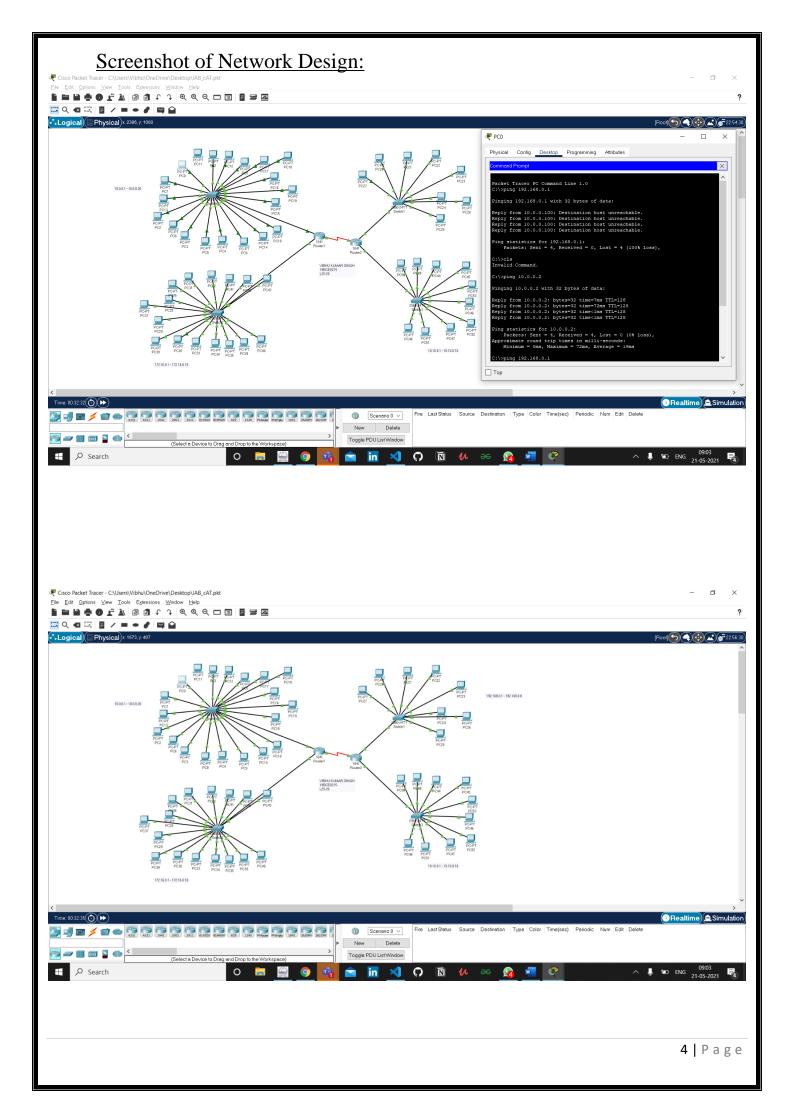
Q1-a) Indian Bank at VIT campus has Loan, Credit, Direct banking and Customer care departments with 20 hosts, 16 hosts, 8 hosts and 10 hosts each along with a application server, web server and mail exchange server. All these servers have to be connected to the internet. Using CPT create the complete network infrastructure for the above given scenario by assigning any class of Private IP address. Simulate the designed network by exchanging simple messages between different network LAN segments. Also check whether the devices between different departments could reach each other. Display the raw statistics of the currently designed individual LAN.

Ans1-a)

Handwritten (Steps and Interpretation of output):

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L25-L26	
Pla) Steps	
TO OLEVA	
* Components used:	
Switches X 4 - 2960 ?	
Routers × 2 - 1841 >	
PCs x 54 - Pc J	
* Assigning IP:	
V	
· LAN with 20 hosts	
1-20 PC given IP ? 10.0.0.1	to
10.0.0.2	ω o
@ LAN with & hosts	
1-8 PC given 19: 192.168.	0.1 to
192.168.0	2.8
· LAN with 16 hosts	
1 1/ 0-	
1-16 Pc given 1P: 172.16.0	0.1 to
172.16.0	0.16
0.1.0.0	
· LAN with 10 hosts	
1 10 0	1
1-10 PCs given IP: 10.10.0.1	
10.10.0.1	b

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* Allugining IP's for Routers	
Louter 0:	
Lean 0°	
FastEthunet 0 : 10.0.0.	100
Fast E " 1 : 190.161	
Senial 0/0 : 12.12.0	
Serial 0/1 : None	
Static:	
L> 10.00.0.0/8	via 12.12.0.2
	 .
Router 1:	
Fast Ethunet 0 % 192.	
1 1: 10.10	
	2.0,2
11 0/1 6 no	one
aloher .	
Static	
192.168.0.0/2	4 via 12.12.0.1
E	
interpretation of output?	
1.10	
We can draw conclusion from	
	eet and working
fust frue. As de can see	
	PC with If address
192.168.0.1.	
CS Scanned with CamScanner	



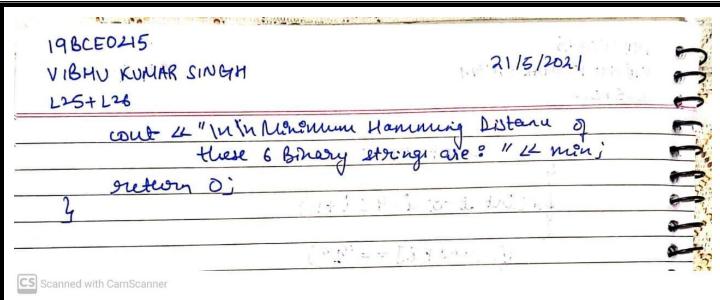
Q1-b) Write a code to find the hamming code distance for any 4-bit sequence binary data. Input to the code is any SIX 4-bit sequence binary data at the runtime.

Ans1-b)

Handwritten (Algorithm and Source Code):

```
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   L25+226
             else
                 ans f="1";
           for (int &=0; 224; i++)
                (ans [2] == "1")
                 count ft;
          Juturn court;
    But main ()
      cout 4" Enter 6 Binery strings: P. In";
      storing arr [6];
      But win = 9999;
      for (int i= 0; il6; i++)
          cin > arr [2];
       for (ent i =0; 266; itt)
        for (ent j= e+1; j26; j++)
            Ent d = hamming (are [2], are [j]);
            if (d < min)
              nun=d;
CS Scanned with CamScanner
```

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Algorithm 3	
1) Get 6 bevary storing Expert	from the arer.
a mitialise mon as enjuity.	Harris Francis
(3) Store each itring of bings	using to CU - last)
3) Store each string of binas	g sipu (1 ragia)
0	
(4) Calculate the hamoning	distance between
each element of the area	
updating men. Opdate.	him if willest
hamming distance is lesse	1 they previous
hemminy distance.	
J 20 W. 3 O %	and the second
6) At the end of the strate	on the number
stred by Min is the	whenever beauting
stred by shin is the is distance of the 6-46	t binary stringe.
	0
Source coole ?	Start,
100 - 100 - 201 - 201 - 201 - 201 -	9-, E-
# Brelude / iostream>	
using namepace std	
	4 1 1
Ent hanning Costoning a, storing 6	
7	of Marin Akir all
storing ars = "";	PRINCE STATE LAND
ent want = 0;	I had not the first
for (ent 2=0; 244; 2++)	. J. J. J
	11.0,20100
4 (a[i] == b[i]) ans $f = 0''$	
ans+="0";	



Screenshots:

