SIR SYED UNIVERSITY OF ENGINEERING & TECHNOLOGY

SOFTWARE ENGINEERING DEPARTMENT SPRING 2021

COMPUTER COMMUNICATION & NETWORKS (SWE-306)

QUIZ 2

Q1. a) Convert the following IPv6 addresses into their compact form.

I. 1080:0000:0000:9000:0000:0000:000C:417A

1080::9000:0:0:C:417A

II. 1001:0000:0000:0000:0000:ABCD:0000:1234

1001::ABCD:0:1234

Q1. b) Convert the following IPv6 addresses into their hexadecimal form.

I. ::200.34.22.1

0000:0000:0000:0000:0200:0034:0022:0001

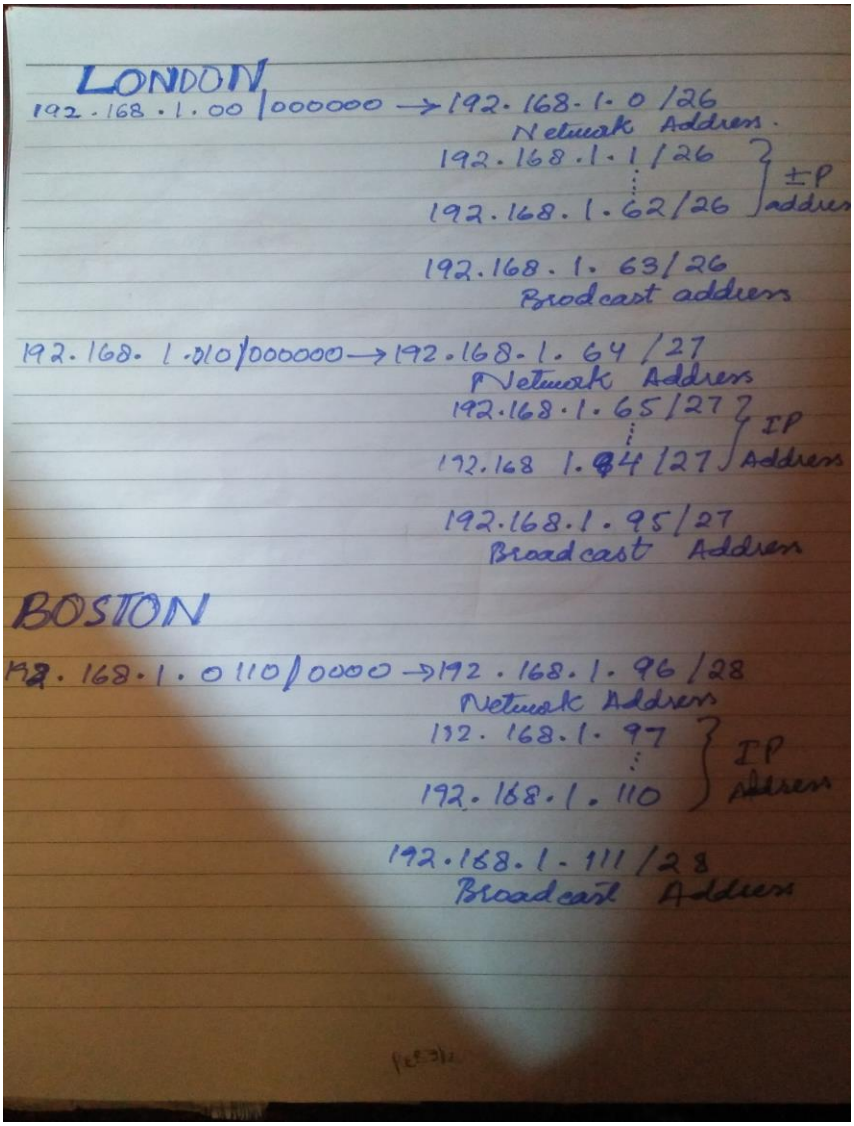
II. 1100::A:ABCD

1100:0000:0000:0000:0000:0000:000A:ABCD

III. ::0

0000:0000:0000:0000:0000:0000:0000:0000

Refer to the exhibit, taking 192.168.1.0/24 network block. Using VLSM methodology that will satisfy the usable host addressing requirements for each network, give complete detail of each network (Network address, Range of usable IP Addresses & Broadcast address).



LONDON

192.168.1.00|000000 → 192.168.1.0/26
Network Address.
192.168.1.1/26
⋮
192.168.1.62/26
} IP address

192.168.1.63/26
Broadcast address

192.168.1.010|000000 → 192.168.1.64/27
Network Address
192.168.1.65/27
⋮
192.168.1.94/27
} IP Address

192.168.1.95/27
Broadcast Address

BOSTON

192.168.1.0110|0000 → 192.168.1.96/28
Network Address
192.168.1.97
⋮
192.168.1.110
} IP Address

192.168.1.111/28
Broadcast Address

192.168.1.01110 | 000 → 192.168.1.112 /29.
↑ Network Address
192.168.1.113 } IP Address
⋮
192.168.1.119 }

192.168.1.120/29
Broad cast Address.

Boston :-

6 hosts :-
LAN Address :-
192.168.1.113 to 192.168.1.119

12 hosts :-
LAN address :-
192.168.1.97 to 192.168.1.110

London :-

24 hosts :-
LAN address :-
192.168.1.65 to 192.168.1.94

37 hosts :-
LAN address :-
192.168.1.1 to 192.168.1.62