

## CSE 3162 COMPUTER NETWORK LAB END SEMESTER EXAMINATION

Name:

BATCH:

REG. No:

Q1. One organization is licensed to use a Network Address 192.168.1.0/26. Organization want to organise its system as per topology given in Figure below by placing

(i) 20 Computers in Linux Lab,

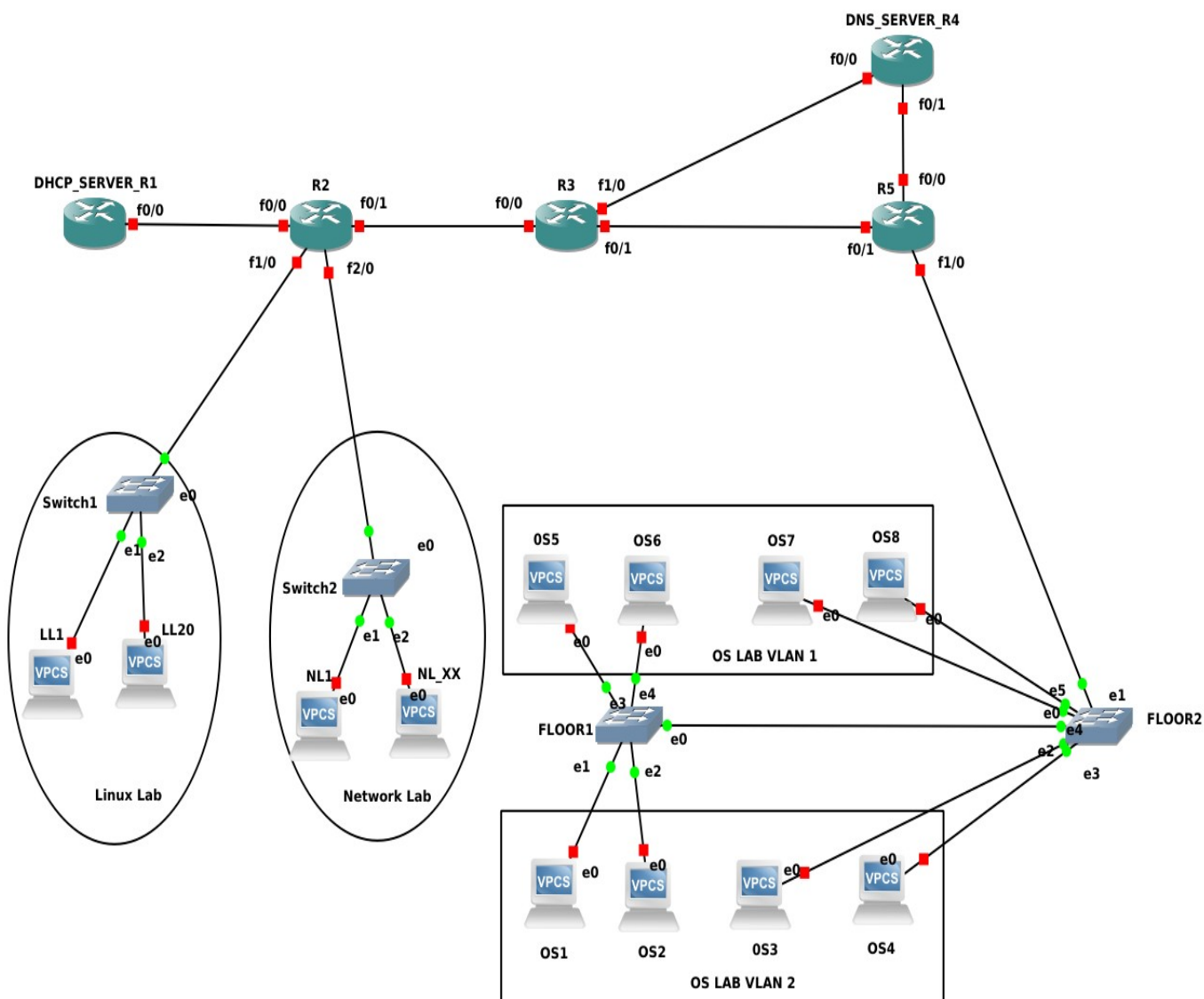
(ii) 8 Computers in OS Lab. (4 each computers in both Floor 1 and Floor 2 switches. Both switches contains VLAN1 and VLAN2 nodes as shown in Topology.)

(iii) Remaining ALL computers in Network Lab.

(iv) LL1, NL1, OS1 and OS5 is configures as SERVER SYSTEMS with Static IP address.

Design the network and assign IP addresses using DHCP Server to All remaining Computers.

Configure DNS server such that all server systems with static IP can be accessed using hostnames.



**(1) IP Address Design:**

	LINUX LAB	OS LAB	NETWORK LAB
Network Address	192.168.1.0/27	192.168.1.32/28	192.168.1.48/28
Network Mask	255.255.255.224	255.255.255.240	255.255.255.240
Broadcast Address	192.168.1.31	192.168.1.47	192.168.1.63
Gateway Address	192.168.1.30	192.168.1.46	192.168.1.62
Address Block size	32	16	16
DNS Address			
Sample Node IP	LL1 :	OS1:	NL1:
	LL20 : 1	OS3:	NL2:
		OS5:	NL3:
		OS7:	LAST NODE:

**(2) Router Configuration Commands/IP routing commands****(a) DHCP\_SERVER\_R1**

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**(b) DNS\_SERVER\_R4 Configurations**

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**(c) R2 Router Configurations**

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**(d) R3 Router Configurations**

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**(e) R5 Router Configurations(Interface and VLAN Related)**

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**(3) VLAN CONFIGURATIONS:(Explain Port Configurations in brief Sentences)**

**(i) Floor 1 Switch:**

**(ii) Floor 2 Switch**

**(4) VPCS CONFIGURATIONS:(SERVER SYSTEMS)**

Node	IP address	Net Mask	Gateway	DNS
(i) LL1				
(ii) NL1				
(iii) OS1				
(iv) OS5				

(Student Signature)

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*(For Official Use Only. Do not Write here)*

PING Test

	From	To	Using IP address	Using Hostname
1	LL1	NL1		
2	OS2	LL1		
3	OS2	NL1		
4	OS2	OS5		