**ASSIGNMENT FORMAT**

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| **COURSE** |  | **ASSIGNMENT NO** |  |
| **MODULE** |  | **ASSIGNMENT DATE** |  |
| **STUDENT NAME** |  | **SUBMISSION DATE** |  |

Q1. What is the difference between Switch and Router?

Ans:

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| **SWITCH** | **ROUTER** |
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Q2. Draw a network topology with the following devices:

1. Two PC’s PC1 & PC2
2. Two switches
3. One Server & One Printer
4. One Router
5. Connect them with cables

**Task:**

* Assign IP Address to each network
* Delete ARP table at PC1, ping PC1 to PC2 in Simulation Mode
* Show ARP and IP entries both inbound and outbound
* Connect ARP and IP entries at each stage using simulation mode
* Connect a router and server and show packet flow

Ans:

1. **Draw the Network and show the topology**

*“Attach the screenshot of Topology”*

1. **Show IP Address allocation and highlight MAC address of all devices**

*“Draw a table of IP Address and MAC address of all concerned devices”*

1. **Delete ARP entry of PC1 and switch to Simulation Mode**

*“Write the steps to delete the ARP entries”*

1. **Send Ping packet from PC1 to PC2**

“*Show the steps involved in pinging packets from one PC to another and vice-versa”*

*“Write down your observations on ARP and IP using inbound and outbound traffic at various levels”*

*“Support your findings with screenshots where required”*

1. **Check ARP table and list your observations**

*“Compare the new ARP entries with table made at point 2”*

*“Support your entries with screenshots”*

1. **Send traffic from PC1 to Server using Simulation Mode**

*“Write the steps involved while establishing the connection between PC1 to Server and back”*

*“Write down your observations on ARP and IP using inbound and outbound traffic at various levels”*

*“Support your steps of connection establishment with screenshots”*

1. **Send traffic from PC2 to Printer using Simulation Mode**

*“Write the steps involved while establishing the connection between PC2 to Printer and back”*

*“Write down your observations on ARP and IP using inbound and outbound traffic at various levels”*

*“Support your steps of connection establishment with screenshots”*

1. **Now connect a router and server , assign relevant addresses and access server using either PC in Simulation Mode**

*“Write down your observations and Support your steps of connection establishment with screenshots”*

**BONUS LAB:**

Find out the IPv4 and MAC address of all the devices at your place make the MAC table, using your Router.

**PRACTICE QUESTIONS:**

Q1. Different between bridge and switch

Q2. Functionality of Switch, Router and difference between them.

Q3. What is L3-switch,