**ASSIGNMENT FORMAT**

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

Q1. Explain TCP handshake?

Ans:

*“Answer in points”*

Q2. Write steps to resolve a FQDN to IP Address, take example of [www.purplesynapz.com](http://www.purplesynapz.com)

Ans:

*“Answer in points assuming you are accessing the website for the first time””*

Q2. You joined Company ABC Private Limited as a Network Administrator, since the company had few employees the need for DHCP was not felt. Now since company has more than 50 employees, your first task is to configure a DHCP server catering 70 address IP allocation and also configure DNS server and make a presentation to show the MD proposal of DHCP and DNS. Assume devices wherever necessary.

**NOTE: In packet tracer, connect only 5 devices, however give provision for 70 IP’s in pool**

Ans:

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

*“Attach the screenshot of Topology”*

1. **Allocate the IP’s to necessary devices like DNS Server, DHCP Server etc**

*“Assign IP’s and list down the allocation”*

*“Attach the screenshots of IP allocation”*

1. **Configure DNS Server**

*“Write the steps to configure the Server along-with FQDN entries”*

*“Attach the screenshots in support of your steps”*

1. **Configure DHCP Server**

“*Show the steps involved in configuring the DHCP Server”*

*Attach the screenshots in support of your steps”*

1. **Assign IP’s to PC/laptops/other devices using DHCP Server**

*“Write down the steps involved while assigning the IP’s to devices”*

*“Support your steps with screenshots”*

1. **Send traffic from any PC to a Web Server using Simulation Mode**

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

1. **Access the same server using FQDN using Simulation Mode**

*“Write the steps involved while establishing the connection between PC to webserver”*

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

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

**BONUS LAB:**

Configure DORA process in DHCP using simulation mode

**PRACTICE QUESTIONS:**

Q1. Explain DORA process and how DHCP relay works

Q2. Different steps involved in DNS resolution protocols

Q3. What is RARP, Proxy ARP and gratuitous ARP

Q4. Various TCP flags