1. Type ipconfig on command prompt. What is your ip address?

192.168.0.7

2. What is the gateway ip address?

My gateway address:192.168.0.1

3. What are the DNS and DHCP servers?

DNS server:192.168.0.1

DHCP sever:106.51.115.154

```
Connection-specific DNS Suffix  . :
Description . . . . . . . . . . . : Realtek RTL8723BE 802.11 bgn Wi-Fi Adapter
Physical Address. . . . . . . . . : CC-B0-DA-5D-94-E7
DHCP Enabled. . . . . . . . . . . : Yes
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::c2d:beb6:f79c:5177%17(Preferred)
IPv4 Address. . . . . . . . . . . : 192.168.0.7(Preferred)
Subnet Mask . . . . . . . . . . . : 255.255.255.0
Lease Obtained. . . . . . . . . . : Wednesday, September 16, 2020 9:40:33 AM
Lease Expires . . . . . . . . . . : Wednesday, September 16, 2020 2:40:29 PM
Default Gateway . . . . . . . . . : fe80::f68c:ebff:fea7:c6ab%17
                                    192.168.0.1
DHCP Server . . . . . . . . . . . : 192.168.0.1
DHCPv6 IAID . . . . . . . . . . . : 147632346
DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-26-C2-A4-E7-98-E7-F4-D7-78-BD
DNS Servers . . . . . . . . . . . : 106.51.115.154
                                    106.51.115.144
NetBIOS over Tcpip. . . . . . . . : Enabled
```

4. Trace route for amrita.edu, amritavidya.edu, with VPN

```
C:\Users\gurus>tracert amrita.edu

Tracing route to amrita.edu [103.10.24.196]
over a maximum of 30 hops:

  1     2 ms     2 ms     4 ms  192.168.0.1
  2    34 ms     3 ms     4 ms  10.193.0.1
  3     4 ms     6 ms     8 ms  106.51.40.153
  4     5 ms     6 ms     5 ms  106.51.40.157
  5     4 ms     6 ms     3 ms  14.141.24.193.static-hyderabad.tcl.net.in [14.141.24.193]
  6    31 ms    34 ms    25 ms  172.31.167.58
  7     *        *        *     Request timed out.
  8    44 ms    41 ms    42 ms  218.248.187.133
  9    41 ms    41 ms    41 ms  117.193.162.45
 10     *        *        *     Request timed out.
 11     *
```

5. Trace the route for an outside domain

6. Is there any difference

nslookup

1. Type nslookup on command prompt

2. Type set type = MX (mail exchanger)

3. Give google.com

4. Observe the output

5. What do you observe?

```
C:\Users\gurus>nslookup
Default Server:  broadband.actcorp.in
Address:  106.51.115.154

> set type=MX
> google.com
Server:  broadband.actcorp.in
Address:  106.51.115.154

Non-authoritative answer:
google.com       MX preference = 30, mail exchanger = alt2.aspmx.l.google.com
google.com       MX preference = 40, mail exchanger = alt3.aspmx.l.google.com
google.com       MX preference = 50, mail exchanger = alt4.aspmx.l.google.com
google.com       MX preference = 20, mail exchanger = alt1.aspmx.l.google.com
google.com       MX preference = 10, mail exchanger = aspmx.l.google.com
>
```

6. Learn nslookup options and do an analysis

```
Command Prompt

Microsoft Windows [Version 10.0.18363.1016]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\gurus>nslookup /help
Usage:
   nslookup [-opt ...]              # interactive mode using default server
   nslookup [-opt ...] - server     # interactive mode using 'server'
   nslookup [-opt ...] host         # just look up 'host' using default server
   nslookup [-opt ...] host server # just look up 'host' using 'server'

C:\Users\gurus>nslookup google.com 8.8.8.8
Server:  dns.google
Address:  8.8.8.8

Non-authoritative answer:
Name:     google.com
Addresses:  2404:6800:4007:810::200e
          172.217.26.206


C:\Users\gurus>
```