**Jaypee Institute of Information Technology, Noida-128**

**CN Lab (15B17CI571) Exercises**

**5th Semester – 2019(Odd Semester)**

Assignment-4: Ping and Traceroute Experiment

**Instructions for the Lab**

1. Login to Windows Operating System for performing below experiment.

Q1. Select three hosts of your choice in the Internet (mention the list in your report) and experiment with pinging each host 3 times . Check if there exist cases which shows packet loss greater than 0% and provide reasoning. Pick one of the above used hosts and repeat the experiment with different packet sizes from 64-bytes to 2048-bytes. Find out average RTT and explain how change in packet size and time of the day impacts RTT. Use online tool http://www.spfld.com for this experiment.

Q2. Perform traceroute experiment (with same hosts used in Q1) for two times determine the routes used. Use tracert command in command prompt.

1. List out the hop counts for each host in each time slot. Determine the common hops betweentwo routes if they exist.
2. Check and explain the reason if route to same host changes at different times
3. Inspect the cases when traceroute does not find complete paths to some hosts and provide reasoning.
4. Is it possible to find the route to certain hosts which fail to respond with ping experiment? Give reasoning

Q.3 Run following command in command prompt and answer following question:

1. What does netstat command does? Why all the foreign addresses are same as 172.16.120.10:3128.
2. What is the functionality of pathping command.
3. What is the address of your default gateway ? Why do we need default gateway. (Use command ipconfig)
4. Find out the IP address of youtube server. Which command will be used for this purpose. Did you get multiple records and why?