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**//ROLL NO:3**

**//Class:SYCSE**

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**//Subject: Computer Network 1**

### **1. COMMAND : IPCONFIG**

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Microsoft Windows [Version 10.0.10586]
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C:\Users\Comp 1>ipconfig

Windows IP Configuration

Ethernet adapter Ethernet:

    Connection-specific DNS Suffix  . : 
    Link-local IPv6 Address . . . . . : fe80::207d:7340:5e04:34b%9
    IPv4 Address. . . . . : 192.168.1.239
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : fe80::1%9
                                192.168.1.1

Tunnel adapter isatap.{63E12A4D-ECC1-4B2F-BC58-254968EE9202}:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix  . : 

Tunnel adapter Teredo Tunneling Pseudo-Interface:

    Connection-specific DNS Suffix  . : 
    IPv6 Address. . . . . : 2001:0:348b:fb58:4f3:5e56:9849:220c
    Link-local IPv6 Address . . . . . : fe80::4f3:5e56:9849:220c%7
    Default Gateway . . . . . : ::

C:\Users\Comp 1>
```

## **2.COMMAND ARP**

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Microsoft Windows [Version 10.0.10586]

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C:\Users\Comp 1>arp

Displays and modifies the IP-to-Physical address translation tables used by address resolution protocol (ARP).

ARP -s inet\_addr eth\_addr [if\_addr]

ARP -d inet\_addr [if\_addr]

ARP -a [inet\_addr] [-N if\_addr] [-v]

-a	Displays current ARP entries by interrogating the current protocol data. If inet_addr is specified, the IP and Physical addresses for only the specified computer are displayed. If more than one network interface uses ARP, entries for each ARP table are displayed.
-g	Same as -a.
-v	Displays current ARP entries in verbose mode. All invalid entries and entries on the loop-back interface will be shown.
inet_addr	Specifies an internet address.
-N if_addr	Displays the ARP entries for the network interface specified by if_addr.
-d	Deletes the host specified by inet_addr. inet_addr may be wildcarded with * to delete all hosts.
-s	Adds the host and associates the Internet address inet_addr with the Physical address eth_addr. The Physical address is given as 6 hexadecimal bytes separated by hyphens. The entry is permanent.
eth_addr	Specifies a physical address.
if_addr	If present, this specifies the Internet address of the interface whose address translation table should be modified. If not present, the first applicable interface will be used.

Example:

```
> arp -s 157.55.85.212 00-aa-00-62-c6-09 .... Adds a static entry.
> arp -a .... Displays the arp table.
```

C:\Users\Comp 1>\_

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### **3. COMMAND ROUTE**

C:\Users\Comp 1>ROUTE

Manipulates network routing tables.

ROUTE [-f] [-p] [-4|-6] command [destination]  
[MASK netmask] [gateway] [METRIC metric] [IF interface]

-f	Clears the routing tables of all gateway entries. If this is used in conjunction with one of the commands, the tables are cleared prior to running the command.
-p	When used with the ADD command, makes a route persistent across boots of the system. By default, routes are not preserved when the system is restarted. Ignored for all other commands, which always affect the appropriate persistent routes.
-4	Force using IPv4.
-6	Force using IPv6.
command	One of these: PRINT Prints a route ADD Adds a route DELETE Deletes a route CHANGE Modifies an existing route
destination	Specifies the host.
MASK	Specifies that the next parameter is the 'netmask' value.
netmask	Specifies a subnet mask value for this route entry. If not specified, it defaults to 255.255.255.255.
gateway	Specifies gateway.
interface	the interface number for the specified route.
METRIC	specifies the metric, ie. cost for the destination.

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### **4. COMMAND TRACERT**

C:\Users\Comp 1>TRACERT

Usage: tracert [-d] [-h maximum\_hops] [-j host-list] [-w timeout]  
[-R] [-S srcaddr] [-4] [-6] target\_name

Options:	
-d	Do not resolve addresses to hostnames.
-h maximum_hops	Maximum number of hops to search for target.
-j host-list	Loose source route along host-list (IPv4-only).
-w timeout	Wait timeout milliseconds for each reply.
-R	Trace round-trip path (IPv6-only).
-S srcaddr	Source address to use (IPv6-only).
-4	Force using IPv4.
-6	Force using IPv6.

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