Question 2:
(c) What are the special IP addresses? Give the significance of these addresses.
(2 Marks)

ANS.

Special IP Addresses are following- 10.0.0.1;

127.0.0.1; 0.0.0.0;

- **10.0.0.1-** 10.0.0.1 is sometimes called a default gateway address as it typically represents the local side of a router's connection to the Internet. 10.0.0.1 is more commonly found in business networks than in homes, which tend to use routers having default addresses in the 192.168.x.x series. Both the 10.x.x.x and 192.168.x.x series are private IP address ranges.
- **127.0.0.1-** Network software and utilities can use 127.0.0.1 to access a local computer's TCP/IP network resources. Messages sent to loopback IP addresses like 127.0.0.1 do not reach outside to the local area network (LAN) but instead are automatically re-routed by the computer's own network adapter back to the receiving end of the TCP/IP stack.

- **0.0.0.0-**TCP/IP software applications also use 0.0.0.0 as a programming technique to monitor network traffic from any valid IP address. While connected computers do not use this address, messages carried over IP sometimes include 0.0.0.0 inside the header when the source of the message is unknown.