

**AMITY SCHOOL OF ENGINEERING AND TECHNOLOGY**  
**MID TERM EXAMINATION (September, 2022)**  
**B. Tech. V Semester**  
**Exploring the Networks**

[IT307]

Time 1 Hr

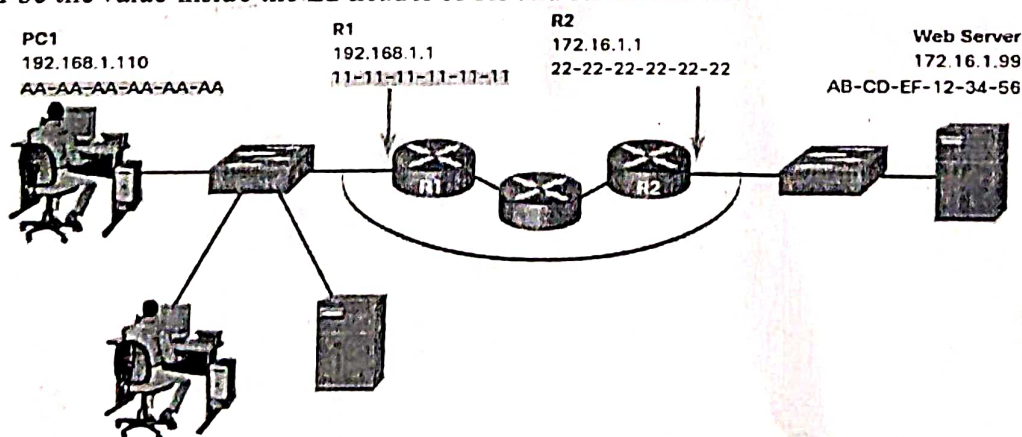
Max. Marks:30

**SECTION-A (Attempt any two questions out of three. Each question carries 06 marks)**

1. Compare the devices and topologies of a LAN to the devices and topologies of a WAN. What are the options connecting to the Internet?
2. What are Unicast, Multicasting and Broadcasting communication? How devices can identify. Explain with suitable diagrams. When a station sends a transmission to the MAC address ff:ff:ff:ff:ff:ff, what type of transmission is it?
3. Describe the ways to access the Cisco IOS device using CLI mode. Write name of two system commands that is used to store the device configuration.

**SECTION-B (Attempt any two questions out of three. Each question carries 06 marks)**

4. What is a user trying to determine when issuing a ping 10.1.1.1 command on a PC? Which command can be used on a Windows PC to see the IP configuration of that computer. Write the commands to configure hostnames on a Cisco IOS device using the CLI.
5. Explain the Protocol data unit (PDU) when an HTTP document must be retrieved from a location other than the local machine, what layer of the OSI model must be accessed first to last?
6. Describe the Datalink frame structure with a neat sketch. In the following image, what should be the value inside the L2 header of R1 and R2 interfaces.



**Section - C: Compulsory question (06 marks)**

7. Differentiate OSI and TCP/IP model. Compare and contrast the UTP cabling and fiber optic cabling in term of following parameters: Bandwidth support, Distance, Immunity to EMI and RFI, Immunity to electrical hazards, Media and connector costs, Installation skills required, and Safety precautions.