

IT307

Enrol. No.

[ET]

END SEMESTER EXAMINATION : NOV.–DEC., 2018

EXPLORING THE NETWORKS*Time : 3 Hrs.**Maximum Marks : 70**Note: Attempt questions from all sections as directed.***SECTION – A (30 Marks)***Attempt any five questions out of six.**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. (a) Explain the purpose of Cisco IOS and describe the command structure of Cisco IOS software. (3)
(b) What is the role of flash memory and describe the ways to access the Cisco IOS device using CLI mode. (3)
3. What are the Cisco IOS Mode? Also configure hostnames on a Cisco IOS device using the CLI.

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4. Describe the wireless media in detail. How wireless media is different from wired media.
5. Describe the purpose of ARP. Explain how ARP requests impact network and host performance.
6. Explain the role of the major header fields in the IPv4 and IPv6 packets.

SECTION – B (20 Marks)

Attempt any two questions out of three.

Each question carries 10 marks.

7. How TCP and UDP protocols differ including port numbers and their uses.
8. Describe application layer protocols that provide IP addressing services, including: TELNET, SSH, SMTP, FTP, DNS and DHCP.
9. (a) Explain how the TCP/IP model and OSI model are used to facilitate standardization in the communication process. (6)
- (b) Explain how local hosts access remote resources on a network. (4)

SECTION – C **(20 Marks)**
(Compulsory)

10. (a) Suppose Infosys Technologies Pvt. Ltd. located at Chandigarh uses CIDR value /27 for subnetting purpose. Compute the following parameters :

- Number of subnets.
- Number of hosts per subnet.
- Valid subnet_ids.
- Valid host range for each subnet_id.
- Broadcast id for each subnet_id. (10)

(b) How a Router Boots Up? Describe all to initiate the bootup process. (5)

(c) What are the Cisco IOS commands to limit access to device configurations? (5)