

Roll No. ....

Total Pages : 03

BCA/M-18

1931

INTERNET TECHNOLOGIES

BCA-364

Time : Three Hours]

[Maximum Marks : 80

**Note :** Attempt *Five* questions in all, selecting at least *one* question from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

**(Compulsory Question)**

1. (a) What is Remote Procedure Call ?
- (b) Explain term IPV4.
- (c) Explain the concept of POP protocol.
- (d) Explain IPSec.
- (e) What is the equivalent layer or layers of the TCP/IP Application layer in terms of OSI reference model ?
- (f) What is e-Mail ?
- (g) What is static and dynamic routing ?
- (h) Briefly describe NAT. **8×2=16**

## Unit I

2. What is OSI Model ? Explain the functions and protocols and services of each layer. 16
3. (a) Explain in detail about Internet architecture with neat diagram.
- (b) Differentiate between :
- (i) USENET and NNTP
- (ii) Internet and Intranet. 8+4+4=16

## Unit II

4. (a) Explain the extension headers in IPv6.
- (b) Discuss in detail about the role of DNS. 8+8=16
5. (a) Compare IPv4 and IPv6.
- (b) Compare and contrast between DHCP and ARP in detail with their applications. 8+8=16

## Unit III

6. (a) What elements would you use to demonstrate MIME type ? Explain in detail.
- (b) Differentiate between FTP and TFTP. 10+6=16
7. (a) Elaborate in detail about SMTP and SNMP protocols with an illustration.
- (b) Differentiate between RTP and RTCP. 10+6=16

## Unit IV

8. (a) What are the principles of firewall design ? Also explain the various firewall techniques.
- (b) What do you mean by internet multicasting ? Discuss. **10+6=16**
9. (a) Discuss in detail about the reliable flooding technique based on link state (OSPF) protocol.
- (b) Write a detailed note on Virtual Private Network (VPN). **10+6=16**

