

Roll No. ....

Subject Code—6714

**M.C.A. (Third Year) EXAMINATION**

(5 Years Integrated Course)

MCA-304

**INTERNET FUNDAMENTALS**

*Time : 3 Hours*

*Maximum Marks : 100*

**Note :** Attempt any *Five* questions. All questions carry equal marks.

1. Explain the growth of computer networking with respect to history as well as technology.
2. (a) How many types of Error may occur, while transmitting the frame ?  
(b) Discuss the working of Hamming distance with the help of example.
3. Explain the given routing :
  - (a) Distance Vector Routing
  - (b) Link State Routing.

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4. (a) Discuss the techniques of Network Address Translation (NAT).  
(b) An organization is granted the block 130.56.0.0/16. The administrator wants to create 1024 subnets :
  - (i) Find the subnet mask.
  - (ii) Find the number of addresses in each subnet.
5. Explain the various addressing techniques available with IPV6.
6. Explain the following :
  - (a) DNS in the Internet
  - (b) DNS Messages.
7. Discuss the working of Electronic Mail. Also discuss the Architecture of E-Mail.
8. Write short notes on any *two* of the following :
  - (a) World Wide Web
  - (b) File Transfer
  - (c) Probing the Internet.