

June - 2008

Roll No.

Subject Code—9690-X

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. (a) What are the important factors that are driving the growth of computer networks in organizations ? Explain citing relevant examples. 15
(b) What is the full form of ping ? How is it useful ? Explain a ping response. 5
2. (a) What do you understand by 'Tracing a Route' ? How does trace route work ? 10

- (b) What is an IP Address ? What is the use of an IP address ? How are IP Addresses classified ? 10
3. (a) What are Packets ? What are the salient rules for packet control ? 10
- (b) Explain the term 'WAN'. Discuss the important characteristics of a WAN. 10
4. (a) How is IP multicast useful for group communication applications on the Internet ? Why are IP multicast services slow on commercial deployment by ISPs and carriers ? Discuss. 10
- (b) How can a datagram be added ? List the steps involved. 10
5. (a) What is meant by IP Fragmentation ? Why is an IP datagram fragmented ? What are the limitations on the size of the fragment ? 7
- (b) Examine the relationship between http, www and FTP. 7
- (c) Explain the terms : Authentication, Non-repudiation and integrity control. 6

6. (a) What do you understand by the term 'Domain Name System' ? 5
- (b) What is the purpose of FTP ? Explain. 5
- (c) Which protocol is used for electronic-mail over the Internet and why ? 10
7. (a) Discuss briefly the critical performance problems in computer networks ? 7
- (b) What is bandwidth-delay product ? How is it useful ? 6
- (c) What are the precautions to be adopted while measuring network performance ? 7
8. Write short notes on any *four* of the following :
- (a) CGI Technology
- (b) Addressing Systems used by SMTP
- (c) Cryptography
- (d) TCP Stream Transport Service
- (e) Digital Signatures
- (f) Social issues in Network Security. 5×4