

Roll No.

BCA-501(O)

B. C. A. (Fifth Semester) EXAMINATION, Dec., 2013

(Old Course)

Paper First

INTRODUCTION TO NETWORKS

Time : Three Hours]

[Maximum Marks : 75

Note : Section A is compulsory. Attempt any *seven* questions out of ten from Section B and any *one* question from Section C.

Section—A

9 each

(Numerical/Analytical/Problematic Questions)

1. (a) For n devices in a network, what is the number of cable links required for a mesh, ring, bus and star topology ?
- (b) Which class does the following IP address belong to ?
 - (i) 157-143-252-207
 - (ii) 93-31-1-245
- (c) A sine wave completes one cycle in $25 \mu\text{s}$. What is its frequency ? Express the frequency in kHz.

[2]

BCA-501(O)

2. (a) What is Protocol ? List the three key elements of a protocol.
- (b) Write the differences between OSI and TCP/IP model.

Section—B

6 each

(Short Answer Type Questions)

3. What is Domain Name Service ?
4. "TCP software is implemented as a finite state machine." Discuss.
5. Explain Encryption and Decryption techniques with diagram.
6. Explain in detail the various classification of topology.
7. What do you mean by the term computer networks ? Give the list of goals of computer network.
8. Explain in detail the TCP/IP reference model.
9. Write short notes on the following :
 - (i) Co-axial cable
 - (ii) Twisted pair cable
 - (iii) Optical fiber cable
10. Define fragmentation and explain about high speed network.
11. What is the uses of fast Ethernet Switches ?
12. Write a short note on network security.

Section—C

15 each

(Long Answer Type Questions)

13. Write short notes on the following :
 - (i) Routers

R-79

[3]

- (ii) e-Mail
- (iii) Bridge
- (iv) Firewall
- (v) SMTP

14. (a) Discuss briefly about the FTP.
- (b) Discuss about the components of network management on the Internet.

BCA-501(O)

R-78

350