[3863] – 453

T.E. (Information Technology) (Semester – I) Examination, 2010
COMPUTER NETWORK TECHNOLOGY (New)
(2008 Course)

Time : 3 Hours Marks : 100

Instructions *: 1) Answers to the* ***two*** *Sections should be written in* ***separate*** *books.*
2) ***Neat*** *diagrams must be drawn* ***wherever*** *necessary.*
3) Black figures to the ***right*** *indicate* ***full*** *marks.*
4) Your answers will be valued as a ***whole.***
5) ***Use*** *of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is* ***allowed.***
6) Assume suitable data, if ***necessary.***

SECTION – I

1. a) Differentiate among circuit switching, packet switching and message switching with one example. **8**

   b) Explain Hub, Switch and Bridge with the help of suitable block diagram. **8**

   OR

2. a) Discuss the design issues of the network layer. **8**

   b) What are the different addresses used in an Internet using TCP/IP protocols ? Explain each in brief with example. **8**

3. a) Define Subnetting. **2**

   b) For a given class C network 195.188.65.0 design the equal subnets in such a way that each subnet has at least 50 nodes. **8**

   c) Explain connection oriented and connectionless services. **8**

   OR

4. a) Define Supernetting. **2**

   b) Explain flow control and congestion control in connection oriented service. **8**

   c) Consider any class - C network with default subnet mask. How many actual hosts can be connected in that network ? Divide that network into 4 equal subnets. What is the new subnet mask ? How many hosts can be connected in each subnet ? (Give all details). **8**

5. a) Explain three way hand shake algorithm for TCP connection establishment. **8**

   b) State and explain similarities and differences between data link layer and transport layer. **8**

OR

6. a) What is silly window syndrome ? How to overcome it ? **8**

   b) Explain dynamic buffer allocation at transport layer with suitable example. **8**

SECTION – II

7. Write **any 3** short notes on : **18**

   1) MIME

   2) Cookies

   3) RSV P

   4) Dynamic and Active pages.

OR

8. a) What is FTP ? Where and when it is used ? Why does it require 02 ports ? Explain at least 05 commands used in FTP. **10**

   b) Explain MIB along with its structure. **8**

9. a) What is the need of RTCP protocol along with RTP protocol in multimedia communication ? **8**

   b) Explain H. 323 architectural model and its protocol stack. **8**

OR

10. a) What is meant by interactivity of real time interactive audio/video ? **8**

    b) Compare between SIP and H. 323. **8**

11. a) What is cashing ? Who should do the cashing ? How long should pages be cashed ? **8**

    b) Explain email architecture and its services. **8**

OR

12. a) Explain Bluetooth architecture with diagram. **8**

    b) Discuss various layers used in ATM architecture. **8**
