



May- June- 2011

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**T.E. (Information Technology) (Sem. – I) Examination, 2011**  
**COMPUTER NETWORK TECHNOLOGY**  
**(New) (2008 Pattern)**

Time : 3 Hours

Max. 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 answer will be **valued** as a whole.  
5) Assume suitable data, if **necessary**.

**SECTION – I**

1. a) Compare packet switching and circuit switching. 8  
b) Why layered protocol is used in network model ? 8  

OR
2. a) List similarities and differences between OSI reference model and the TCP/IP reference model. 8  
b) Whether the network layer should provide a connection oriented services or connectionless service ? Explain with suitable example. 8
3. a) Explain the significance of 'bind' socket system call. Does it apply to all sockets at server and client ? What parameters are specified by its various arguments. 10  
b) For a given class – C network, design subnets in such a way that each subnet can have atleast 50 host. 8  

OR
4. a) Compare between BOOTP and DHCP host configuration protocol. 8  
b) What is the purpose of ARP and RARP protocols ? What is the size of Ethernet frame carrying an ARP Packet as well as RARP packet ? 10
5. a) Explain TCP with its header format. 8  
b) Define Quality of Service and list the parameters typical to transport layer. 8  

OR
6. Write short notes on 16
  - 1) NAT
  - 2) TCP flow control mechanism
  - 3) Performance issues of Transport layer.

**P.T.O.**



## SECTION – II

7. a) How the resolver looks up a remote names in DNS ? 8  
b) What is FTP ? Where and when it is used ? Why does it require 2 ports ?  
Explain at least 5 user commands used in FTP. 10  
OR
8. a) Differentiate between persistent and non-persistent HTTP connection. 8  
b) List and explain the necessity of each area of network management. 10
9. a) Write short notes on 8  
1) SIP 2) RSVP  
b) Explain various scheduling mechanisms used in communication of multimedia applications. 8  
OR
10. a) Explain the RTSP protocol. Why this is needed ? 8  
b) Differentiate between SIP and H.323 protocol. 8
11. a) Explain the 802.11 architecture. 8  
b) Write short notes on 8  
1) Frame relay  
2) ATM switch  
3) X.25  
OR
12. a) Explain Fast Ethernet in detail. 8  
b) Describe the architecture of Broadband ISDN. 8