310250

Seat No.	

T.E. (Computer Engineering) (Semester – II) Examination, 2014
COMPUTER NETWORKS
(2008 Course)

Time : 3 Hours Max. Marks : 100

***Instructions** : 1) Answers to the **two** Sections should be written in **separate** answer books.*

*2) Answer **any three** questions from **each** Section.*

*3) **Neat** diagrams must be **drawn wherever** necessary.*

*4) Figures to the **right** side indicate **full** marks.*

*5) **Use** of calculator is **allowed**.*

*6) Assume **suitable** data, if **necessary**.*

SECTION – I

1. a) What are the Nuts and Bolts for Internet ? Explain with suitable diagram. **8**

   b) Compare Circuit Switching and Packet Switching Techniques of Network Core. Explain in brief the functionality of DHCP server. **8**

   OR

2. a) Draw and explain the functionality of Internet Protocol Stack. **8**

   b) Compare SMTP with HTTP. **8**

3. a) Draw and explain TCP Segment Structure. **8**

   b) Suppose that we have the following three 16bit words. **4**

   0110011001100000

   0101010101010101

   1000111100001100

   Calculate the UDP Checksum for above.

   c) How connection Management is done in TCP ? **6**

   OR

4. a) Explain TCP Congestion Control concept in detail. **8**

   If MSS = 500 bytes and RTT = 200msec then what is resulting initial sending rate ?

   b) Explain Multiplexing and De-multiplexing in transport layer. **4**

   c) Why UDP does not provide reliable data transfer service ? Justify it. **6**

5. a) Describe Integrated service and differentiated services. **8**

   b) What is QoS ? Explain QoS parameters. **8**

   OR

6. a) Explain the working of RSVP in detail. **8**

   b) Explain different Scheduling Algorithm. **8**

SECTION – II

7. a) Explain the features of IPV6 with its datagram format. Consider following IP addresses : **8**

   i) 233.1.1.3 ii) 223.1.2.5

   iii) 223.1.3.8 iv) 223.1.8.10

   Find out NetId and HostId of above IP address.

   b) Which Protocol is used to obtain IP address by giving physical address ? Explain in detail ? And 255.255.255.255 is what type of IP Address. **8**

   OR

8. a) Compare ARP with RARP. **8**

   b) Explain concept of Internet Control Message Protocol. **8**

9. a) Explain Link state routing Algorithm. **8**

   b) Write a short note on Hierarchical Routing. **4**

   c) Compare RIP and OSPF. **6**

   OR

10. a) How Distance Vector Routing Algorithm is work ? **8**

    b) Explain Routing Policy of BGP. **6**

    Compare Broadcast and Multicast Routing. **4**

11. a) Explain the functionality of Hubs and Switches. **8**

    b) What is the goal of Point to Point Protocol ? Explain in detail. **8**

    OR

12. a) Explain the Principle Characteristics of ATM. **8**

    b) Draw and explain Multiprotocol Label Switching (MPLS) Header format. **8**
