CS - 604 B.E.

VI Semester Examination, December 2014

Computer Networking

Time: Three Hours Maximum Marks: 70

Note: Total number of questions 10. Attempt one question (including all parts) from each unit. Assume missing data, if any, suitably.

Unit -1

1. a) Explain how message exchange takes place between machine A and B using TCP connection.
b) How does the layer of TCP/IP protocol suite correlate to the layers of OSI model?

2. a) How does Frame relay differ from ATM.
b) Explain the terms in detail:

3. a) Explain the Noisy Channel Protocol: Go-Back-N ARQ.
b) What are the various connecting devices used in networking? Explain design and functioning of Bridges.
4. a) Using CRC a bit stream 1101011011 is to be transmitted. If the generator polynomial is find the

b) Compare the performance of stop and wait protocol and sliding window protocol.

5. a) Explain ALOHA and slotted ALOHA protocol. Compare the efficiency in each case,
b) Compare IEEE 802.3, 802.4 and 802.5.

Or

6. a) Explain why token bus is suited for real time application in comparison to CSMA/CD with the help of suitable examples.
b) Suppose a group of N stations share a 56 kbps pure ALOHA channel. Each station outputs 1000 bit frame on an average of once every 100 sec, even if the previous one has not yet been sent (e.g. the stations can buffer outgoing frames). What is the maximum value of N?

7 a) What is congestion control and how it is implemented in Network Layer? What is the role of Choke packet in managing congestion?
b) What is the Isolated Routing? Explain one isolated routing in details.

8. a) Explain IPv4 header format with the help of a neat diagram. State four major improvements of IPv6 over IP4.
b) Describe a way to do reassembly of IP fragments at the destination.

9.a) Explain the working of User Datagram Protocol.
b) What is Cryptography? Explain Public and Private Keys to be used for Cryptography mechanism.

OR

10. a) explain the Working of TCP protocol and how the connection is released in a TCP
b) Explain the functioning and steps used in Substitution and transposition Ciphers.