# III B.Tech I Semester Examinations, June-2016

### COMPUTER NETWORKS

Time: **3** hours (CSE, IT) Max. Marks: **60**

# SECTION – A

**Answer all ten questions: 10×1=10M**

1. What OSI stands for

a) open system interconnection b) operating system interface

c) optical service implementation d) none of the above

1. Which layer links the network support layers and user support layers

a) session layer b) data link layer c) transport layer d) network layer

1. Which transmission media has the highest transmission speed in a network?

a) coaxial cable b) twisted pair cable c) optical fiber d) electrical cable

1. The portion of physical layer that interfaces with the media access control sub layer is called a) physical signaling sub layer b) physical data sub layer

c) physical address sub layer d) None of the above

1. Consider **an instance of TCP’s Additive Increase Multiplicative Decrease(AIMD) algorithm where the window size at the start of the slow start phase is 2 MSS and the threshold at the start of the first transmission is 8 MSS. Assume that a time out occurs during the fifth transmission. Find the congestion window size at the end of the tenth transmission.**

**a)** 8MSS b) 14 MSS c) 7 MSS d) 12 MSS

1. Size of TCP header is \_\_\_\_\_\_\_\_ bytes.
2. An organization has a class B network and wishes to form subnets for 64 departments. The subnet mask would be… i) 255.255.0.0 ii)255.255.252.0 iii)255.255.128.0 iv) none
3. Data in the IPv4 layer is called \_\_\_\_\_\_\_.
4. \_\_\_\_\_\_\_ is a server that stores a file about the zone for which it is an authority.
5. Which is one of the architecture paradigm  
   a) Peer to peer b) Client-server c) HTTP d) Both a and b

**SECTION – B**

**Answer all five questions: 5×2= 10M**

1. What is domain name? How is it alternatively known?
2. List the kinds of Topologies?
3. Define LAN and specify the range of it.
4. What is the role of Name server in DNS?
5. Name the advantages of optical fiber over twisted-pair and coaxial cable.

**SECTION – C**

**Answer all four questions: 4×5 = 20M**

1. Compare and contrast the difference between OSI and TCP/IP reference models.

**(OR)**

1. How are OSI and ISO related to each other? How they are different from each other.
2. Explain why most of the addresses in class A are wasted? Explain why a medium size or large size corporation does not want a block of class C addresses.

**(OR)**

1. What are the differences between open loop and closed loop congestion control?
2. Show a request that retrieves the document */ usr/ users/doc/doc1*. Use at least two general headers, two request headers and one entity headers.

**(OR)**

1. Explain the two main categories of DNS message.
2. If a router has 15 entries in its group table, should it send 15 different quires periodically or just one? Explain your answer.

**(OR)**

1. Discuss shortest path routing with a suitable example.

**SECTION – D**

**Answer all two questions: 2×10= 20M**

1. Describe in detail the various kinds of transmission media.

**(OR)**

1. Enumerate in detail about the checksum and Cyclic Redundancy check algorithm with an example.

26. Explain how connections are established at the transport layer. What is flow control in TCP? **(OR)**

1. Draw a sketch for TCP header format and explain every field in detail?