# Question Paper

## MANIPAL ACADEMY OF HIGHER EDUCATION

### SCHOOL OF INFORMATION SCIENCES
### FIRST SEMESTER MASTER OF SCIENCE - MSc (Information Science)
### DEGREE EXAMINATION (MAKE - UP) - JANUARY 2018
### DATE : FRIDAY, JANUARY 05, 2018
### TIME : 10:00AM - 1:00PM
### Computer Networks [MIS 509]

**Marks: 100**                                                                 **Duration: 180 mins.**

## Answer all the questions.

1)      Explain any five applications of computer networks.     (10)

2)      Write a short note on Hubs and Switches.     (10)

3)   What is masking? Explain mask in classful and classless addressing.     (10)

    (2+8)

4)   Write a short note on the following special addresses with suitable diagrams:     (10)

    A. Direct Broadcast Address
    B. Loopback Address

    (5+5)

5)      Describe ARP packet format and operations with neat diagram.     (10)

    (5+5)

6)   How hierarchical routing reduce the routing table contents? Explain with suitable example.     (10)

    (5+5)

7)      How Distance Vector (DV) routing algorithm is working to find the shortest route and modify the routing table? Explain with example.     (10)

8)   What is congestion? Explain any four causes of congestion in a network.     (10)

(2+8)

9) How does TCP keep track of the segments transmitted and received at the host? Explain the numbering system used in TCP segments. (10)

(4+6)

10) What is flow control? Explain how sliding window protocol accomplishes the flow control? (10)

(2+8)

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