

Roll No.

Total No. of Questions : 08]

[Total No. of Pages : 02

M. Tech.

NETWORK SECURITY

SUBJECT CODE : CS - 503

Paper ID : [E0683]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours

Maximum Marks : 100

Instruction to Candidates:

- 1) Attempt any **Five** questions.
- 2) All questions carry equal marks.

- Q1)** (a) List the layers of OSI reference model and explain each of them in detail.
- (b) Compare TCP/IP reference model with OSI reference model.
- Q2)** (a) Compare the IPv4 and IPv6. Discuss various transition strategies used to move from IPv4 to IPv6.
- (b) Write short notes on DQDB and HIPPI.
- Q3)** (a) Discuss the various reasons that lead to congestion in networks.
- (b) Explain the protocol stack of IEEE 802.11 Wireless LAN with a neat diagram.
- Q4)** (a) What do you mean by Multicast Routing. Discuss in detail the various issues and mechanisms associated with Multicast routing.
- (b) Describe how IP Multicast is mapped to Ethernet Multicast.
- Q5)** (a) Differentiate between the following :
- HTTP and S-HTTP
 - IGMP and ICMP
 - Gigabit Ethernet and Wireless Ethernet
- (b) What is Mobile IP. What are the security issues related to Mobile IP.

- Q6)** (a) What is cryptography and its role in security. Name various encryption algorithms. Also Compare Symmetric and Asymmetric Key Cryptography.
- (b) IN RSA, given two prime numbers $p=23$ and $q=19$, Find n and p , choose $e=5$, and try to find d .
- Q7)** (a) Explain the architecture of TCP for extending it to transaction-oriented applications.
- (b) What services IPSec provides at network layer. Discuss in detail.
- Q8)** Write short note on any two of the following :
- (a) QoS.
- (b) ADSL.
- (c) Digital Certificates.

