

Exam.Code:0918
Sub. Code: 6407

2053
B.E. (Computer Science and Engineering)
Sixth Semester
CS-601: Computer Networks and Security

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) Discuss the use of computer networks.
- b) Describe the features of LAN.
- c) What is meant by piggybacking? What are its advantages and disadvantages?
- d) How are errors caused in transmission lines?
- e) What is meant by congestion? List the ways of avoiding congestion.
- f) Discuss the issues in network security.
- g) Why is layered architecture of network preferred?
- h) What is the principal difference between circuit switching and packet switching?
- i) What is flooding? What are its disadvantages?
- j) What are the primary services offered by a computer network? (10x1)

UNIT - I

- II.
 - a) Explain design issues of layers. Explain ISO OSI reference model with diagram.
 - b) Explain in detail about the error and flow control mechanisms employed at data link layer. (2x5)
- III.
 - a) Differentiate between circuit switching and packet switching with example.
 - b) What do you understand by a Routing Algorithm with pros and cons? What are its functions? (2x5)
- IV.
 - a) What is congestion control? Explain one technique for controlling the congestion in a network.
 - b) List out the different fields that are missing in TCP header as compared to that of UDP and give the reasons for their missing. (2x5)

P.T.O.

(2)

UNIT - II

- V. a) What is the format of an email? Explain the architecture of a mailing system.
b) Describe the role of a DNS on a computer network with reference to its components. (2x5)
- VI. a) What is SNMP? What is the important difference between request response message and a trap message in SNMP" List out the seven message types supported by SNMP.
b) Explain in detail about symmetric key algorithms with neat sketch. (2x5)
- VII. Write short note on-
a) Digital Signature
b) S/MIME (2x5)

x-x-x