

2053
B.E. (Information Technology)
Fourth Semester
PCIT-402: Computer Networks

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) Explain the terms LAN, MAN, WAN and PAN.
- b) What is the difference between port number and IP address?
- c) Differentiate between pure Aloha and slotted Aloha.
- d) Explain in brief about network topologies.
- e) What is the difference between network layer delivery and transport layer delivery? (5x2)

UNIT - I

- II. a) Differentiate between circuit switching, packet switching and message switching.
b) Explain the functions of different layers of OSI model. (2x5)

III. Write short notes on the following:-

- a) Coaxial cable
- b) Network software
- c) Collision free protocols
- d) Error correction and detection (10)

- IV. a) Discuss in detail about different network topologies.
b) Explain the working of network based on CSMA/CD protocol. What are its advantages and disadvantages? (2x5)

UNIT - II

- V. a) Explain the distance vector routing algorithm in detail.
b) Explain how leaky bucket protocol used for congestion control. (2x5)

P.T.O.

(2)

VI. a) What is multiplexing and de-multiplexing at transport layer?

b) Explain and compare IPv₄ and IPv₆. (2x5)

VII. Write short note on following:-

a) DNS

b) Network security

c) SNMP

d) Electronic mail

e) Flooding

(10)

x-x-x