

Total No. of Questions: 09

B.Tech. (CSE / IT) (2011 Onwards) (Sem. – 4)

COMPUTER NETWORKS-I

M Code: 56606

Subject Code: BTCS-403

Paper ID: [A1185]

Time: 3 Hrs.

Max. Marks: 60

INSTRUCTIONS TO CANDIDATES:

1. **SECTION-A is COMPULSORY** consisting of **TEN** questions carrying **TWO** marks each.
2. **SECTION-B** contains **FIVE** questions carrying **FIVE** marks each and students have to attempt any **FOUR** questions.
3. **SECTION-C** contains **THREE** questions carrying **TEN** marks each and students have to attempt any **TWO** questions.

SECTION A

1. a) Explain in brief about network topologies.
b) What is the need of Protocols?
c) What are the advantages of Optic fiber as a transmission media?
d) Explain in brief the term Noise in reference to transmission impairments.
e) Explain the term checksum in reference to error detecting codes.
f) Discuss IEEE 802.3 frame format.
g) What do you mean by congestion control? Explain in brief.
h) Differentiate between Distance vector and Link State routing algorithms.
i) Explain the term Flow control in brief.
j) What do you mean by FTP? Discuss.

SECTION B

2. Differentiate between Wired and Wireless Networks in detail. (5)
3. Differentiate between Circuit Switching, Packet Switching and Message switching. (5)
4. a) Write a brief note on transmission medium. (2.5)
b) Explain in brief about the term computer network and its goals. (2.5)
5. Explain in detail the concept of flow control and buffering in reference to transport layer. (5)
6. Write a brief note on following terms: (3+2=5)
 - a) Domain Name System
 - b) World Wide Web

SECTION C

7. Write a detailed note on the following sliding window protocols (3+4+3=10)
 - a) Stop & wait ARQ
 - b) Go-back-N ARQ
 - c) Selective repeat ARQ
8. Explain the Distance Vector Routing Algorithm with an example. (10)
9. Write a detailed note on following protocols: (5+5=10)
 - a) ALOHA
 - b) CSMA