M. Tech (ECE) 1st Semester Examination
Data Communication Network
Subject Code: ECL-507

Time Allowed: 03 hours. Maximum Marks: 100

Before answering the question paper the candidate should ensure that they have been supplied the correct question paper. Complaints in this regard, if any, shall not be entertained after the examination.

Note: Attempt any five questions and all questions carry equal marks.

Section – A

1(a) Draw the block diagram of digital communication system and explain the working of each block.
(b) Discuss the advantages of optical fiber over coaxial cable.

2(a) What are the redundancy checks used in data communication? Is it possible to detect a damaged data unit by parity bit detection?
(b) Explain the difference between static and dynamic routing and make a list of routing algorithm types.

3(a) Describe the function of transport layer.
(b) What do you understand by the term congestion control in transport layer?

Section – B

4(a) Discuss the importance of FTP and SMTP.
(b) How are HTTP and WWW related to the internet?

5(a) Discuss the types of networks and topologies for LAN?
(b) How is intranet different from the internet? How can intranet setup without a web server?

6(a) Describe the security protocols in the internet.
(b) What is symmetric and asymmetric cryptosystems? Explain the difference between identification and authentication.