

**B.Tech. - VIEP - ELECTRONICS AND
COMMUNICATION ENGINEERING
(BTECVI)**

00908

Term-End Examination

June, 2015

**BIELE-016 : DATA COMMUNICATION
AND NETWORK**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **seven** questions. All questions carry equal marks. Assume missing data suitably.

1. (a) Draw and explain OSI reference model. 5
(b) Which of the OSI model layers deal primarily with network operations ? Explain. 5
2. (a) Differentiate between LAN and WAN. 5
(b) Make a sketch outlining the LAN topology at your school or place of business. 5
3. Explain the function of physical layer. Discuss the following connection strategies : 10
(a) Circuit switching
(b) Packet switching

4. What is the function of data link layer ? Explain carrier sense multiple access with collision detection (CSMA/CD). 10
5. Distinguish between UDP and TCP protocols found in transport layer with their model. 10
6. Explain IEEE Standard 802.4 with their advanced features and applications. 10
7. (a) How is congestion controlled in the network layer ? Explain any one method in detail. 7
 (b) What is hamming distance in error detection and correction codes ? 3
8. Explain the following terms :
 - (a) HDLC 4
 - (b) World Wide Web 3
 - (c) Virtual Terminal Protocol 3
9. Distinguish between a token bus and token ring LAN. Describe how a token bus deals with a lost token. 10
10. (a) Explain the various Multiple Access Protocols used in Medium Access Sublayer. 7
 (b) How is data compressed in the presentation layer ? 3