

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

**Term-End Examination
December, 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. Distinguish between a local area network and a wide area network. List typical LAN topologies. 10
2. What is an open system ? Discuss the various design issues of layers in data communication. 10
3. (a) Distinguish between circuit and packet switching with examples. 5
(b) How is the maximum data rate of a channel calculated ? Explain with an example. 5

- QUESTION PAPER
4. Draw the OSI reference model and explain each layer briefly. 10
 5. Describe ALOHA protocol. List out its advantages and disadvantages. 10
 6. Explain an unrestricted simplex and a simplex stop-and-wait protocol of data link layer. 10
 7. Discuss the content and purpose of each field in the token ring network. 10
 8. (a) Explain various network layer design issues. 5
 (b) Discuss Ethernet with its applications. 5
 9. (a) Differentiate between TCP and UDP, with required model. 5
 (b) Distinguish between two-way and three-way handshaking. 5
 10. Explain any *two* of the following : 2×5=10
 - (a) Presentation Layer – Data Compression Techniques
 - (b) SLIP (Serial Line Internet Protocol)
 - (c) CSMA (Carrier Sense Multiple Access) Protocol
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