

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

Term-End Examination

00376

June, 2016

**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. Use of scientific calculator is allowed.

1. What are Wireless LAN Protocols ? Explain the IEEE standard 802.11 with its salient features and applications. 5+5=10

2. (a) Compare and discuss LAN and MAN systems.

- (b) Draw a sketch outlining the MAN topology in your town or city. 5+5=10

3. (a) Give reasons why a network might use an error correcting code instead of error detection and retransmission.
- (b) IEEE 802.16 supports four service classes. Which service class is the best choice for sending uncompressed videos ? $5+5=10$
4. Compare and discuss the important features of OSI and TCP/IP reference model in detail. Give the concept of hybrid reference model and its layer framework. 10
5. Explain the concept of slotted ALOHA scheme in detail. State its advantages over pure ALOHA scheme. $5+5=10$
6. What are the design issues in the data link layer ? Explain the term framing. Compare the different framing methods based on their advantages. 10
7. (a) What are the various elements of transport protocol ?
- (b) Discuss the issue of connection establishment in detail for the transport layer. $5+5=10$

8. What is the importance of a simplex stop-and-wait protocol ? Explain the simplex protocol for a noisy channel in detail. 10
9. (a) Explain the leaky bucket algorithm for traffic shaping in the network layer.
- (b) Explain the need of logical link control in medium access sublayer. 5+5=10
10. Write short notes on the following : 5+5=10
- (a) HDLC
- (b) Petri Net Model
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