No. of Printed Pages : 3

**BIEL-021**

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

00783

## Term-End Examination

## December, 2016

## BIEL-021 : COMPUTER COMMUNICATION NETWORKS

*Time : 3 hours* *Maximum Marks : 70*

***Note :*** *Attempt any **seven** questions. All questions carry equal marks. Missing data, if any, may be suitably assumed. Use of scientific calculator is permitted.*

**1.** (a) Write down the main differences between OSI model and TCP/IP reference model. 5

(b) Draw and explain the block diagram of dial-up modem. 5

**2.** (a) Explain physical, logical and port addressing. 5

(b) What is framing in data link control ? Explain the different methods of framing in data link control. 5

3. (a) What is meant by protocols ? Discuss stop and wait protocol in noiseless channel. 5

(b) Describe sliding window flow control with appropriate example. 5

4. (a) How is throughput improved in slotted ALOHA over pure ALOHA ? 5

(b) Differentiate carrier sense multiple access with collision detection (CSMA/CD) and collision avoidance (CSMA/CA). 5

5. (a) Draw the architecture of IEEE 802.11. Write down the addressing mechanism of IEEE 802.11. 5

(b) Compare various characteristics like data rate, transmission media, access method and supporting standard of various high speed LANs. 5

6. (a) Write down the main features of FDMA and TDMA channelisation techniques. 5

(b) What are the advantages of IPv6 over IPv4 ? 5

7. (a) Explain classful addressing and classless addressing in IPv4. 5

(b) Differentiate backbone and virtual LANs. 5

8. (a) What is Intra and Inter domain unicast routing protocols ? 5

(b) Why are transport layer protocols like TCP and UDP called end-to-end protocols ? What is the difference between them ? 5

9. (a) Define the urgent and push features of TCP. What is the function of transport layer ? 5

(b) Write down the well-known ports for User Datagram Protocol (UDP). 5

10. Write short notes on any ***two*** of the following : $2 \times 5 = 10$

(a) Multicast Routing Protocols

(b) HDLC (High Level Data Link Control)

(c) Connecting Devices in LANs

(d) Cable TV for Data Transmission