BIEL-021

B.TECH. ELECTRONICS AND COMMUNICATION ENGINEERING (BTECVI)

Term-End Examination

December, 2013

BIEL-021 : COMPUTER COMMUNICATION NETWORKS

Time : 3 hours   *Maximum Marks : 70*

Note :   *(i)   Attempt any seven questions.*

   (ii) All questions carry equal marks.

1. (a)   What are the various advantages of layered   **5**
          architecture ? Explain the view of layers
          protocols and services for the development
          of OSI reference model.

    (b)   Compare the similarities and differences   **5**
          between the OSI and TCP reference models.

2. (a)   What do you mean by the noisy channel ?   **5**

    (b)   What are different algorithms, used for bit   **5**
          stuffing ? Discuss any one in brief.

3. (a)   What do you understand by non persistant   **5**
          CSMA ?

    (b)   Differentiate between pure and slotted   **5**
          ALOHA. Show frame transmission and
          vulnerable time for slotted ALOHA.

4. Differentiate between wired and wireless LAN.   **10**
    Explain their IEEE standard.

5. (a) What are the differences among backened **5**
LANS, SANS and backbone LANS ?

(b) Explain the character oriented protocol, bit **5**
oriented protocol related to the data link
layer.

6. (a) What is the difference between open loop **5**
and closed loop congestion control ? How
traffic policing differs from traffic
shapping ?

(b) Draw and explain the flow chart of the **5**
leaky-bucket algorithm used for policing the
traffic ? How leaky-bucket is used as traffic
shaper ?

7. What are the drawbacks of IPv4 ? Give the **10**
advantages of IPv6 over IPv4. Show that how IPv6
packet header can be converted into IPv4 packet
header ?

8. (a) What is the difference between Hub and **5**
switch ?

(b) Discuss the role of bridge, router and **5**
gateway in internet connection.

9. Discuss various elements of transport protocols **10**
in detail. How addressing, establishing and
releasing of connection are achieved at transport
layer ?

10. (a) Explain the operation of HDLC as bit **5**
oriented link control protocol.

(b) Discuss the design issues for the transport **5**
layer.