DIPLOMA – VIEP – COMPUTER SCIENCE AND ENGINEERING (DCSVI)

00565

Term-End Examination

June, 2015

BICSE-006 : ELECTIVE – COMPUTER NETWORKS

Time : 2 hours   *Maximum Marks : 70*

*Note : Answer **five** questions in all. Question no. 1 is **compulsory**. Each question carries equal marks.*

1. Choose the correct answer from the given four alternatives :   *7×2=14*

    (a) Which of the following is **not** a networking hardware ?
    (i) NIC Card
    (ii) Router
    (iii) Compact Disk
    (iv) Hub

    (b) LAN stands for
    (i) Land Area Network
    (ii) Lesser Area Network
    (iii) Local Area Network
    (iv) Limited Area Network

(c) One to Many communication is often called

(i) Multicast

(ii) Broadcast

(iii) Unicast

(iv) None of the above

(d) ARP is a _____ layer protocol.

(i) Transport

(ii) Application

(iii) Data Link

(iv) Network

(e) Address size in IPv4 is of

(i) 16 bits

(ii) 4 bytes

(iii) 64 bits

(iv) 12 bytes

(f) UDP stands for

(i) Uni-Directional Protocol

(ii) User Defined Protocol

(iii) User Datagram Protocol

(iv) User Defined Parameters

(g) Sharing of channel is done in

(i) Circuit Switching

(ii) Packet Switching

(iii) Both the above

(iv) None of the above

2. (a) Differentiate between LAN, MAN and WAN, using suitable examples. 7

(b) Explain the TCP/IP reference model, describing each of its layers briefly. 7

3. (a) Explain how error and flow control are done in the data link layer. 7

(b) Using a suitable diagram, explain the Point to Point Frame format. Also describe the PPP stack briefly. 7

4. (a) What are multiple access protocols ? Explain the ALOHA protocol briefly. 7

(b) Differentiate between Fast and Gigabit Ethernet in detail. Also describe the term Digital Cellular Radio. 7

5. Explain any two Unicast Routing protocols in detail. *14*

6. (a) What are the various tasks performed in the transport layer ? Also explain the concept of crash recovery using suitable examples. 7

(b) How is congestion control performed in the transport layer ? Explain in detail. 7

7. (a) Explain the need of a DNS Server. Also explain the e-mail architecture briefly. 7

   (b) What is World Wide Web ? Explain its architecture briefly. 7

8. Write short notes on any *four* of the following : $4 \times 3\frac{1}{2} = 14$

   (a) Frame Relay

   (b) Virtual LANs

   (c) IPv4 vs IPv6

   (d) ATM

   (e) TFTP

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