19/10/13

Reg. No. | | | | | | | | | |

# ANNA UNIVERSITY

## DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

**END SEMESTER EXAMINATION – OCTOBER 2013-REGULATION 2008**

**B.E (ELECTRICAL & ELECTRONICS ENGINEERING) – SEMESTER-VI**

**EE9354 DATA COMMUNICATION AND COMPUTER NETWORKS**

**Time : 3 Hours** **Answer ALL Questions** **Max. Marks : 100**

**Part A** **(10 × 2 = 20)**

1. Compare Broadcast and Multicast.
2. What is piggybacking?
3. What is jitter?
4. Explain the purpose and working of ARP.
5. Write Nagle's algorithm.
6. What is meant by segment?
7. Differentiate the working of *Plug-in* and *Helper Application* with respect to browser.
8. What are the protocols used for mail retrieval and mailbox manipulation?
9. What are the three requirements Digital Signatures should accomplish?
10. What is firewall?

**Part B** **(5 × 16 = 80)**

11. (i) Draw and explain IPSec authentication header in detail. (8)

11. (ii) Explain the working of Transposition Cipher with an example. (8)

12. (a) Explain in detail the OSI reference model with appropriate diagram. (16)

**(OR)**

12.(b) (i) Explain HDLC in detail. (8)

12.(b)(ii) Describe Ethernet MAC Sublayer Protocol in detail with frame format. (8)

13.(a) (i) Explain Hierarchical Routing with an example. (10)

13.(a)(ii) Explain the Warning Bit and Choke Packets methods of congestion control. (6)

**(OR)**

13.(b) (i) Draw and explain IPv4 header. (8)

13.(b) (ii) Explain the working of Distance Vector Routing. (8)

14. (a) (i) Consider a DNS request originating from ee.iitm.ac.in to resolve the address of www.annauniv.edu. Sketch the request and replies involved in the process. (8)

14.(a)(ii) Explain MIME in detail. (8)

**(OR)**

14. (b) (i) Explain Cookies in detail. (8)

14.(b)(ii) Draw and list the steps involved in processing the information from an HTML form. (8)

15. (a)(i) Draw TCP connection management finite state machine (for connection establishment and closing). (10)

15.(a)(ii) Explain TCP Service model. (6)

**(OR)**

15. (b)( i) Explain TCP Congestion Control in detail. (8)

15.(b)(ii) Explain Crash recovery in detail. (8)