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

Question Paper Code : 51428

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2013.

Sixth Semester

Electronics and Communication Engineering

CS 1302 A – COMPUTER NETWORKS

(Regulation 2008)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What is meant by network architecture?
2. Define "Communication subnet".
3. What is piggyback?
4. What is meant by hamming distance?
5. What are the uses of classless addressing scheme?
6. What is the drawback of distance vector routing?
7. What is the need for UDP?
8. Mention any four parameters of quality of service.
9. What are the advantages of a hierarchical name space over a flat name space?
10. What is meant by resource record?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain any two line coding techniques with their merits and demerits. (8)

(ii) List three different techniques in serial transmission and explain the differences. (8)

Or

(b) (i) Explain the various multiplexing and switching techniques in detail. (8)

(ii) Explain the characteristics of various guided transmission medium and compare them. (8)

12. (a) (i) Write the CRC error detection algorithm and illustrate the same for the dataword 1010011110 and the divisor 10111. (10)

(ii) Explain the stop-and-wait protocol in detail. (6)

Or

(b) (i) Explain the go-back-N automatic repeat request protocol in detail. (8)

(ii) Discuss the selective repeat ARQ algorithm. (8)

13. (a) Explain the principles of link state routing. (16)

Or

(b) (i) Explain the working of distance vector routing protocol and how the count-to-infinity problem is solved in this routing protocol. (10)

(ii) Explain the concept of subnet with suitable examples. (6)

14. (a) (i) Explain the issues in connection establishment and connection tear down in transport layer. (6)

(ii) What is Congestion control? Why it is more important in communication networks? (4)

(iii) Explain the packet structure of UDP. (6)

Or

(b) (i) Explain various congestion control techniques adopted in transport layer. (10)

(ii) Write and explain the Nagles algorithm. (6)

15. (a) Explain the working of SMTP with its commands and responses for delivery and viewing of emails with necessary diagrams.

Or

(b) (i) Compare and contrast the public and private key cryptosystems. (6)

(ii) Explain the architecture of WWW. (10)
