

B.E DEGREE END SEMESTER EXAMINATIONS, May 2013

Electronics Engineering Department/ECE Department

Sixth Semester BE ECE

EC9353 Communication Networks

(Regulation 2008)

Time:3 hours

Max.Marks:100

Answer ALL Questions

Part-A(10 x 2 = 20 marks)

- 1.Why are there 7 layers in ISO-OSI reference model?
- 2.Why is 'twisting' done in a twisted pair cable?
- 3.What is Asynchronous Balanced Mode?
- 4.Apply Binary Countdown protocol to the scenario when the stations 0010, 0100, 1001, 1010 are all trying to get the channel.
- 5.What is Time to Live (TTL)? What does it indicate?
- 6.Why is it that ICMP can send messages only to the source and not to an intermediate router?
- 7.What is URL?
- 8.What is ephemeral port number?
- 9.Why do we employ multiple stage time and space switching?
- 10.What is a DCS?

Part-B(5 x 16= 80 marks)

- 11(i)A client-server system uses a satellite network, with the satellite at a height of 40000 km. What is the best case delay in response to a request? (2)
- (ii)List two ways in which the OSI reference model and the TCP/IP reference model are the same. Also, list two ways in which they differ. (4)
- (iii)With appropriate sketch(es), discuss about the ISO-OSI stack. (10).
- 12a(i)Discuss in detail about HDLC. (8)
- (ii)Given , Message D =1010001101 and predetermined divisor pattern P=110101, determine Frame Check Sequence FCS. If the receiver receives 101000110100110, check if the message has been received intact without error. (8)

OR

12b(i) A group of N stations share a 56 kbps pure ALOHA channel. Each station outputs a 1000 bit frame on an average of once every 100 second, even if the previous one has not yet been sent (e.g., the stations can buffer outgoing frames). What is the maximum value of N? (4)

(ii) Six stations, A through F, communicate using the MACA protocol. Is it possible that two transmissions take place simultaneously? Explain your answer. (4)

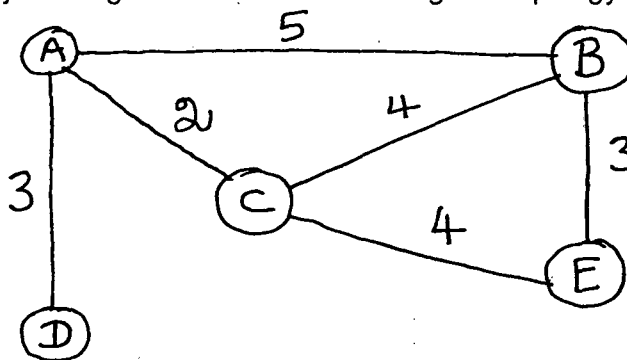
(iii) Discuss in detail on issues related to internetworking. (8)

13a(i) Change the following IPv4 address from binary notation to dotted decimal notation.

10000001 00001011 00001011 11101111 (2)

(ii) Describe two node loop instability problem. (4)

(iii) Apply Dijkstra algorithm to node A of the given topology and obtain the routing table. (10)



OR

13b(i) Compare and contrast ARP and RARP. (6)

(ii) Discuss in detail about IPv4. (10)

14a Elaborate on TCP protocol.

OR

14b Discuss in detail about (i) SNMP and (ii) Network Security..

15a(i) Derive the number of cross points necessary in a 3 stage space division switching matrix. (6)

(ii) Describe about Time Division Switching. (10)

OR

15b Discuss about (i) No. 4 ESS Toll Switch and (ii) Digital Cross Connect Systems.