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B.E / B.Tech (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2014

Electronics and Communication Engineering

Semester : VI

EC383-Computer Networks

(Regulation 2004)

Time: 3 Hours

Answer ALL Questions

Max. Marks 100

PART-A (10 x 2 = 20 Marks)

1. What is a layer? Is layering advantage or disadvantage discuss.
2. What are the functions of the transport layer and datalink layer?.
3. What is CRC ? where it is used?.
4. Explain the TRT in IEEE 802.5 protocol .
5. Define congestion in a network. Name any two algorithms used to mitigate it.
6. Differentiate between a switch and a router.
7. List any two uses of ARP?
8. For a linear network of 6 nodes discuss the count to infinity problem of Distance vector routing.
9. Define HTTP and WWW.
10. List the main functions of a security protocol.

Part – B (5 x 16 = 80 marks)

- 11.i With neat diagram explain the functions of each layer in a TCP/IP reference model and compare it with OSI model.
12. a)i Explain the different types of communication using wireless media.
ii) compare the advantages and disadvantages of optical fiber over copper cable.

OR

b) Draw and explain the frame structure of IEEE 802.3. Also find the minimum frame length for a network of 5 nodes connected using 10 BaseT cable. Assume the total propagation delay the network is 50 μ s.

13. a) Draw and explain the frame format of HDLC protocol .Also setup a Asynchronous balanced mode connection between two Stations and explain the information transfer between them under Go-back-n and selective repeat protocol.

OR

b.i) Explain with neat required diagram the internetworking devices

14. a i) Differentiate symmetric key and Asymmetric key cryptography
ii) Explain the RSA cryptosystem.

OR

b) Write notes on i) TCP ii) FTP iii) TELNET IV) SNMP

15. a.i) Differentiate circuit switching, virtual circuit switching, virtual packet switching. (10)
ii) Draw the different address format for IPV4.(6)

b) consider 7 nodes connected in a linear bus topology, assume hop count as the cost function explain the Dijkstra's routing. (8)

ii) Draw the packet format of link state routing and highlight the need for sequence number and TTL field.
