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Question Paper Code: 45402

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2018

Fifth Semester

Electronics and Communication Engineering

14UEC502 - DATA COMMUNICATION AND NETWORKS

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- The _____ layer changes bits into electromagnetic signals.
 - Physical
 - Transport
 - Data link
 - None of the above
- Why was the OSI model developed?
 - The rate of data transfer was increasing exponentially
 - Standards were needed to allow any two systems to communicate
 - Manufacturers disliked the TCP/IP protocol suite
 - None of these
- Data link control deals with the design and procedures for _____ communication.
 - node-to-node
 - host-to-host
 - process-to-process
 - server-to-server
- For wireless network, _____ was invented.
 - CSMA/CD
 - CSMA
 - CSMA/CA
 - ALOHA

- (b) (i) Classify the categories of network. (6)
- (ii) Discuss about ISO reference model with a neat sketch. (10)
17. (a) Given the data word as 1010101010 and the divisor 10111. Show the generation of the code word at the sender site. Show the checking of the code word at the receiver site. (16)

Or

- (b) (i) Describe the functional design of any one protocol defined for noisy channel. (8)
- (ii) Explain the access method used for wireless LANs. (8)
18. (a) (i) Distinguish between packet switching and datagram approach. (6)
- (ii) Illustrate link state routing with an example. (10)

Or

- (b) (i) In TCP if the value of HELEN is 1000. How many bytes of option are included in the segment. (8)
- (ii) Write the various techniques involved in improving the quality of service. (8)
19. (a) (i) Summarize the concept of congestion control with a leaky bucket algorithm. (6)
- (ii) Discuss the quality of service parameters in networks and how to improve them. (10)

Or

- (b) Explain the congestion control techniques applicable for TCP networks. (16)
20. (a) (i) What are the main categories of DNS messages? Explain. (8)
- (ii) Name the common components and their functions in a browser. (8)

Or

- (b) (i) Explain why FTP does not have a message format. (6)
- (ii) Discuss the requirements and design details of asymmetric key cryptography. (10)
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