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Question Paper Code: 45402

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Fifth Semester

Electronics and Communication Engineering

14UEC502 - DATA COMMUNICATION AND NETWORKS

(Regulation 2014)

Duration: 1:45 hour

Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. Compare datagram networks with virtual circuit subnets.
2. Distinguish between ADSL and SDSL.
3. What are virtual LANS?
4. Mention the advantage and disadvantage of stop and wait flow control.
5. Why IPV6 is preferred then IPV4?
6. Draw the general format of ICMP messages.
7. List the objectives of frame relay congestion.
8. How will the congestion be avoided?
9. What is the purpose of domain name system?
10. What are the advantages & disadvantages of public key encryption?
11. Define ICMP.
12. List the objectives of frame relay congestion.

13. Define various types of data delivery.
14. Show how HTTP and WWW are related to the internet.
15. Differentiate symmetric-key cryptography and asymmetric-key cryptography.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. How are the layers abstracted in OSI model? Explain their functions. (10)
17. 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. (10)
18. Briefly define sub-netting and super-netting. How do the subnet mask and supernet mask differ from a default mask in class-full addressing? (10)
19. If an application needs to protect the boundaries of the message to be transmitted, which protocol should be used? Explain the choice of protocol with justification. (10)
20. What are the main categories of DNS messages? Explain. (10)