17CS52

Fifth Semester B.E. Degree Examination, July/August 2021
Computer Networks

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions.*

1 a. Explain the interface between the process and the computer Network socket with diagram. **(10 Marks)**

   b. Describe persistent and non-persistent connections of HTTP. **(10 Marks)**

2 a. Explain the services offered by DNS and also explain the DNS record and message format. **(10 Marks)**

   b. Define File Transfer Protocol, its connections and working. Writ about FTP commands and replies also. **(10 Marks)**

3 a. Explain connection oriented multiplexing and de-multiplexing. **(08 Marks)**

   b. Alice wants to communicate Bob over a TCP connection. Design a model showing different stat transition they undergo during i) Connection establishment   ii) Data transfer iii) Connection termination. **(08 Marks)**

   c. Define rdt_send ( ) and rdt_rcv( ). **(04 Marks)**

4 a. Explain TCP segment and its services with a diagram. **(10 Marks)**

   b. What is congestion in a network? How TCP handles congestion. **(10 Marks)**

5 a. What is routing? Explain the structure of router with a neat diagram. **(10 Marks)**

   b. Explain the spanning tree algorithm and give its advantages and disadvantages. **(10 Marks)**

6 a. Discuss the IPV6 packet format. **(08 Marks)**

   b. Describe Network layer services briefly. **(06 Marks)**

   c. How does router determine the replacement VC number for a packet traversing the router? **(06 Marks)**

7 a. Define 5 elements of mobile network architecture. **(10 Marks)**

   b. Explain Indirect and Direct Routing to Mobile node. **(10 Marks)**

8 a. What is hand off? What are the steps in accomplishing hand off? **(10 Marks)**

   b. Compare mobile IP and GSM mobility. **(05 Marks)**

   c. Explain Agent Discovery with diagram. **(05 Marks)**

9 a. Explain PCM Encoder and PCM Decoder. **(07 Marks)**

   b. Briefly explain properties of Video and Audio. **(07 Marks)**

   c. Describe the DiffServ Internet Architecture. **(06 Marks)**

10 a. Illustrate the interaction between Client and Server for HTTP streaming for Audio and Video. **(08 Marks)**

    b. Explain content Distribution Network. **(08 Marks)**

    c. Mention limitations of Best – Effort IP service. **(04 Marks)**

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