

Question Paper Code: 94202

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

Fourth Semester

Computer Science and Engineering

19UCS402 – COMPUTER COMMUNICATION & NETWORKS

(Regulation 2019)

Duration : 1:45 hrs

Maximum : 50 Marks

PART A - (10 x 2 = 20 Marks)

(Answer any ten of the following questions)

1. What is a protocol? (CO1) (U)
2. Assume 6 devices are arranged in a mesh topology. How many cables are needed? How many ports are needed for each device? (CO1) (App)
3. Define Bandwidth and Latency. (CO1) (U)
4. If data is 011011111111100 what is the transmitted data and if received data is 011111100001110111101111101100111110 what is the actual data in HDLC framing? (CO2) (App)
5. Define socket. How it is created? (CO2) (U)
6. What are the issues in data link layer? (CO2) (U)
7. What is the network address in a class A subnet with the IP address of one of the hosts as 25.34.12.56 and mask 255.255.0.0? (CO3) (App)
8. Find the class of the following addresses
227.13.14.88 (CO3) (App)
227.13.14.88
9. Analyze how routers differentiate the incoming unicast, multicast and broadcast IP packets. (CO3) (An)
10. Suppose a TCP connection is transferring a file of 5000 bytes. The first byte is numbered 10001. What are the sequence numbers for each segment if data are sent in three segments, each carrying 1000 bytes (CO4) (App)
11. Justify that TCP is a reliable byte stream protocol? (CO4) (An)
12. Differentiate between TCP and UDP (CO4) (U)

13. Draw and construct the scenario of Electronics mail. (CO5) (App)
14. Mention the types of HTTP messages (CO5) (U)
15. Define SMTP (CO5) (U)

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Estimate your idea on how guided media differ from unguided media ?
Briefly explain any three methods used for data communication using guided media and two methods used for data communication using unguided media. (CO1) (U)
17. Identify the working principle of Bluetooth and develop a neat sketch to depict its architecture. (CO2) (App)
18. Find the class of each IP address. Give suitable explanation. i) 227.12.14.87
ii) 193.14.56.22 iii) 14.23.120.8 (iv) 252.5.15.111 v) 134.11.78.56. (CO3) (App)
19. Develop with examples the three mechanisms by which congestion control is achieved in TCP. Differentiate these mechanisms. (CO4) (An)
20. I Design and Develop various firewalls and its types with neat diagram. (CO5) (Ap)

