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**Question Paper Code: 55404**

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

Fifth Semester

Electronics and Communication Engineering

15UEC504- DATA COMMUNICATION AND NETWORKS

(Regulation 2015)

Duration: Three Hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 1 = 5 Marks)

- The Medium Access Control sub layer resides in \_\_\_\_\_ Layer CO1-R  
(a) Transport (b) Network (c) Physical (d) Data link
- \_\_\_\_\_ Control refers to a set of procedures used to restrict the amount of CO2-U  
data that the sender can send before waiting for acknowledgment  
(a) Flow Control (b) Error (c) Transmission (d) None of the above
- DHCP (dynamic host configuration protocol) provides \_\_\_\_\_ to the client CO3-U  
(a) IP Address (b) MAC Address (c) URL (d) None of the above
- A \_\_\_\_\_ is a TCP name for a transport service access point. CO4-R  
(a) Port (b) Pipe (c) Node (d) None of the above
- In file transfer protocol, data transfer can be done in \_\_\_\_\_ CO5-R  
(a) Stream Mode (b) Block Mode (c) Compressed Mode (d) All of the above

PART - B (5 x 3 = 15 Marks)

- Contrast circuit switching and packet switching. CO1- Ana
- Outline the importance of ARQ with respect to error control? CO2-U
- Enumerate the advantages of IPV6 over IPV4? CO3-U
- List the various congestion control mechanism CO4-R
- Justify your answer with respect to persistent HTTP? CO5-R

PART -C ( 5 x 16 = 80 Marks)

11. (a) Draw the OSI network architecture and explain the functionalities of each layer in detail. CO1-U (16)
- Or
- (b) (i) Explain the Frequency Division Multiplexing technique in detail. CO1-U (8)
- (ii) Demonstrate and explain in detail about the features of transmission media. CO1-U (8)
12. (a) Discuss in detail about the flow control mechanisms with suitable illustration. CO2-U (16)
- Or
- (b) Write Short notes on CO2-U (8)
- (i) Wireless LAN
- (ii) Wired LAN CO2-U (8)
13. (a) Describe in details the working principle of Dynamic Host Control Protocol. CO3-U (16)
- Or
- (b) Outline the features of ICMP and Contrast with IGMP. CO3-U (16)
14. (a) How is congestion controlled? Explain in detail about congestion controlled technique in detail. CO4-U (16)
- Or
- (b) Explain the scheduling technique to improve the QoS. CO4-U (16)
15. (a) (i) Demonstrate the functionality of SNMP. CO5-U (8)
- (ii) Discuss in detail, File Transfer an application layer protocol. CO5-U (8)
- Or
- (b) Illustrate the performance of RSA Algorithm with prime numbers 7 and 11 respectively. CO5-U (16)