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Reg. No. : | | | | | | | | | | |

Question Paper Code: 55404

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

Fifth Semester

Electronics and Communication Engineering

15UEC504 - DATA COMMUNICATION AND NETWORKS

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (5x 1 = 5 Marks)

1. Divides the stream of bits received into data units is called CO1- R

   (a) Segmentation (b) Reassembly (c) Frames (d) Encryption

2. Automatic repeat request error management mechanism is provided by CO2- U

   (a) logical link control sublayer (b) media access control sub layer

   (c) network interface control sublayer (d) none of the mentioned

3. The network layer concerns with CO3- R

   (a) bits (b) frames (c) packets (d) none of the mentioned

4. Which one of the following is a transport layer protocol used in internet? CO4- U

   (a) TCP (b) UDP (c) Both (a) &(b) (d) None of the above

5. The _____ is an application-layer Internet standard protocol. CO5- R

(a) POP3 (b) SMTP (c) SNMP (d) HTTP

PART – B (5 x 2= 10Marks)

6. Write short notes on topologies CO1- U

7. What is piggybacking? CO2- U

8. Why is ARP request broadcast but ARP reply unicast? CO3- U

9. Describe why an application developer may choose to run an application over UDP than TCP? CO4- Ana

10. List the types of Domain names. CO5- U

PART – C (5 x 16= 80Marks)

11. (a) Explain the procedures to build a network. CO1-App (16)

Or

(b) (i) Compare OSI and TCP/IP model. CO1 -Ana (8)

(ii) Explain the protocol hierarchies. CO1 -U (8)

12. (a) Explain the Go back N and Stop and wait protocol in detail. CO2 -U (16)

Or

(b) (i) Calculate the throughput for stop-and-wait flow control mechanisms if the frame size is 4800 bits, bit rate is 9600 bps and distance between device is 2000 km.Speed of propagation over the transmission is 200,000 Km/s. CO2 -App (8)

(ii) Distinguish between wired LAN and wireless LAN. CO2 -App (8)

13. (a) List and explain all the Address mapping protocols in detail. CO3- U (16)

Or

(b) (i) Compare IPV4 and IPV6. CO3- Ana (8)

(ii) Explain Unicast routing protocols in detail. CO3- U (8)

14.	(a)	Explain how TCP connections are established using the three way handshake. What happens when two hosts simultaneously try to establish a connection?	CO4-U	(16)
		Or		
	(b)	Explain the importance of QOS, List all the techniques to improve QOS and explain in detail.	CO4 -U	(16)
15.	(a)	Explain E-Mail architecture and services in detail.	CO5- App	(16)
		Or		
	(b)	Explain the Concept of cryptography and its types.	CO5- Ana	(16)

55404