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

Question Paper Code: 94806

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Fourth Semester

Information technology

19UIT406- COMPUTER NETWORK

(Regulations 2019)

Duration: Three hours Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1.	Illustrate Network Devices with its types	CO1- U
2.	Draw the diagram for any two topologies in the network and explain their functionalities	CO1- U
3.	Write the difference between pure aloha and slotted aloha	CO2- U
4.	Define Error correction and Error detection.	CO2- U
5.	What is meant by logical addressing?	CO3- U
6.	Draw the sketch of IPv4 packet header	CO3- U
7.	What are the services provided by transport layer protocol?	CO4- U
8.	What are the techniques to improve QOS?	CO4- U
9.	Name four factors needed for a secure network.	CO5- U
10.	List the protocols used in the application layer	CO5- U

PART – B (5 x 16= 80Marks)

11.	(a)	Apply the concept of TCP/IP models in any social media application and explain in detail about TCP/IP Layers and Architecture of the Protocol with neat diagrammatic representation	CO1-App	(16)
		Or		
	(b)	Apply the concept of ISO/OSI layers in any social media application and clearly explain their layers ad its functionalities in detail with neat diagrammatic representation	CO1-App	(16)

12.	(a)	A bit stream 1101011011 is transmitted using the standard CRC method. The generator polynomial is x4+x+1. What is the actual bit string transmitted? Apply CRC checker and find whether there is any error in data transmission	CO2-App	(16)
		Or		
	(b)	Apply the error correction techniques for the given inputs data bits to be transmitted is 1011001 and number of redundancy bits = 4 and Determining the even parity bits for alotted 11 bits.	CO2-App	(16)
13.	(a)	Explain in detail about the types, key principles and methodology of routing protocols in network layer with neat diagrammatical representation	CO3-U	(16)
		Or		
	(b)	Explain in detail about the circuit switching and packet switching with neat diagrammatical representation	CO2-App	(16)
14.	(a)	Compare the QOS in terms of Integrated Services and Differentiated Services. And also list out the algorithm in traffic shaping with neat diagrammatical explanation	CO4-Ana	(16)
		Or		
	(b)	Examine the Three Way Handshake protocol to establish the transport level connection. And also Analyze in detail about various Services provided by the Transport Layer	CO4-Ana	(16)
15.	(a)	List out various Components, Features and types in cryptography and also Explain in detail with neat diagrammatical representation	CO5- U	(16)
		Or		
	(b)	List out various Protocols in Application layer and explain any two protocols in detail with neat diagrammatical representation	CO5- U	(16)