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Reg. No.												

Question Paper Code	21351

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV/DEC 2022

First Semester

M.E. - Computer Science and Engineering (with specialization in Networks)

20PCNPC103 - ADVANCED COMPUTER COMMUNICATION AND NETWORKING

(Regulations 2020)

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks, K-Level,CO
1.	List out the three criteria necessary for an effective and efficient network.	2,K1,CO1
2.	Outline the features provided by layering in OSI model.	2,K2,CO1
3.	Differentiate unicasting and multicasting.	2,K4,CO2
4.	Illustrate the functions of bridge.	2,K2,CO2
5.	Define sub-netting with example.	2,K1,CO3
6.	What are the metrics used in determining the best path for a routing protocol?	2,K5,CO3
7.	Give the applications of SSL.	2,K2,CO4
8.	Define QoS by means of traffic management.	2,K4,CO4
9.	Outline the need of proxy.	2,K2,CO5
10.	Define topology. Give its types.	2,K1,CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	(i) Give the classification of computer network and explain it.	5,K2,CO1
		(ii) Examine the types of Addressing scheme in detail.	8,K4,CO1
		OR	
	b)	Explain TCP/IP protocol suite with neat sketch and list out differences between TCP/IP and OSI model.	13,K2,CO1
12.	a)	Define multiplexing and explain its types briefly.	13,K2,CO2
		OR	
	b)	Compare and contrast the circuit switching and packet switching networks.	13,K2,CO2
13.	a)	(i) Explain the various layers of X.25 packet switching network.	7,K2,CO3
		(ii) Create a LAN in which show interconnection of 5 host, 2 hub, and one switch. Assign appropriate IP addresses to the required devices.	6,K3,CO3
		OR	

b) Illustrate the OSPF routing protocol operations with an appropriate example. *13,K3,CO3*

14. a) Outline the requirements for web security and explain the operations of SSL with neat diagram. *13,K2,CO4*

OR

b) List out the characteristics of QOS. Explain any one queue management algorithm neatly. *13,K2,CO4*

15. a) Demonstrate the operations performed in packet filtering and layer 7 filtering. Give appropriate example. *13,K2,CO5*

OR

b) Discuss the following

(i) DMZ *6,K2,CO5*

(ii) NAT *7,K2,CO*

PART - C (1 × 15 = 15 Marks)

16. a) A student attaches a Laptop to campus network and request / receives a web page from google.com. Explain the sequence of operations carried out with the help of different protocols used in application, transport, network and link layers. *15,K3,CO1*

OR

b) (i) Illustrate the drawbacks of traditional routing methods. *6,K3,CO3*

(ii) Consider the network shown in figure. Compute the shortest path from C to all other nodes using OSPF algorithm. Also update forwarding table of C. *9,K3,CO3*