

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

MCA DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Third Semester

Master of Computer Applications

BX4006 – Basics of Computer Networks

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	Define a computer network.	UN	1	2
2.	Differentiate unicast, multicast and broadcast communication.	UN	1	2
3.	What is meant by framing?	RE	2	2
4.	Outline the services provided by the data link layer.	UN	2	2
5.	Write the different classes of IP address.	RE	3	2
6.	Why routing is an important concept in networks?	UN	3	2
7.	How a well-known port differs from an ephemeral port?	RE	4	2
8.	Classify the advantages of connection-oriented services over connectionless services.	UN	4	2
9.	Summarize the use of SNMP protocol in a network.	UN	5	2
10.	Compare plain text and cipher text.	UN	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a i List and explain the different categories of networks.	AN	1	6
	ii What is a topology? Explain different LAN topologies in detail.	AN	1	7
	Or			
	b With a neat diagram, explain OSI reference model in detail.	AN	1	13
12.	a Explain various flow control mechanisms in detail.	AN	2	13
	Or			
	b Analyze the architecture of IEEE 802.11.	AN	2	13

13.	a	Construct circuit switching and packet switching networks.	AP	3	13
Or					
	b	Explain the functions of the border gateway protocol used for Inter domain routing in internetwork.	AP	3	13
14.	a i	Examine the Three Way Handshake protocol to establish the TCP connection.	AN	4	7
	ii	Analyze various congestion avoidance techniques in TCP.	AN	4	6
Or					
	b	Compare UDP with TCP. Explain UDP checksum with one example.	AN	4	13
15.	a	Apply and assess how SMTP protocol is used to transfer a message from one host to another.	AP	5	13
Or					
	b	Identify the usage of DES algorithm for secure transmission.	AP	5	13

*PART – C (Marks 1*15 = 15)*

<i>Q.No</i>		<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
16.	a	Write in detail about guided transmission media.	UN	1	15
Or					
	b	Interpret various error detection and correction mechanisms in detail.	UN	2	15