

# CBCS SCHEME

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22MCA14

## First Semester MCA Degree Examination, June/July 2023 Computer Networks

Time: 3 hrs.

Max. Marks: 100

Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. M : Marks , L: Bloom's level , C: Course outcomes.

Module – 1			M	L	C
Q.1	a.	Define Networks. Illustrate the categories of Networks with suitable diagrams.	10	L2	CO1
	b.	Interpret the functionalities of layers in the OSI Model.	10	L2	CO1
OR					
Q.2	a.	Describe the functionalities of TCP/IP protocol suite.	10	L2	CO1
	b.	Classify the levels of addressing used in an internet employing TCP/IP protocols.	10	L2	CO1
Module – 2					
Q.3	a.	Identify the causes of transmission impairment.	10	L2	CO2
	b.	Represent the parameters which affects the performance of a network.	10	L2	CO2
OR					
Q.4	a.	Explain the line coding with respect to polar and bipolar scheme.	10	L2	CO2
	b.	Describe the role of Pulse Code Modulation (PCM) technique in digitization.	10	L2	CO2
Module – 3					
Q.5	a.	Define Multiplexing. Classify the categories of multiplexing.	10	L2	CO3
	b.	Interpret spread spectrum with respect to frequency hopping and direct sequence.	10	L2	CO3
OR					
Q.6	a.	Represent the role of datagram networks in data communication.	10	L2	CO3
	b.	Explain the functionalities of virtual circuit networks.	10	L2	CO3
Module – 4					
Q.7	a.	Express the process of error detection and error correction in block coding.	10	L2	CO4
	b.	Explain the role of Hamming code in linear block code.	10	L2	CO4

OR

Q.8	a.	Describe the process of CRC encoder and decoder with suitable example.	10	L2	CO4
	b.	Discuss about checksum error detection with respect to one's complement and internet check sum.	10	L2	CO4

Module – 5

Q.9	a.	Discuss the design and algorithm of simplest protocol in noiseless channel.	10	L2	CO4
	b.	Represent the design and algorithm of stop and wait protocol in noiseless channel.	10	L2	CO4

OR

Q.10	a.	Explain about stop and wait automatic repeat request protocol algorithm in noisy channel.	10	L2	CO4
	b.	Discuss about go back N automatic repeat request protocol algorithm in noisy channel.	10	L2	CO4

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