K. J. Somaiya Institute of Technology, Sion, Mumbai-22
(Autonomous College Affiliated to University of Mumbai)

Supplementary ~~Exam Nov – Dec 2025~~ Jan 2026.
Program: B. Tech Scheme III
Regular Examination: TY Semester: V
Course Code: CEC503 and Course Name: Computer Networks

Date of Exam: ~~24/11/2025~~ 28/01/2026.   Duration: 02.5 Hours   Max. Marks: 60

Instructions:
(1) All questions are compulsory.
(2) Draw neat diagrams wherever applicable.
(3) Assume suitable data, if necessary.

Q. No.	Question	Max. Marks	CO	BT level
Q 1	Solve any **two** questions out of three: (05 marks each)	10		
a)	What is an IP address? What do you mean by classful addressing and notations of classful addressing?		CO4	U
b)	Describe the concept of framing. List the different framing methods and explain anyone in detail.		CO3	U
c)	Compare LAN, MAN and WAN		CO2	U
Q 2	Solve any **two** questions out of three: (05 marks each)	10		
a)	Explain the Three-way handshake process in TCP.		CO5	U
b)	Describe the twisted cable construction, types and applications		CO2	U
c)	Compare TCP and UDP		CO5	U
Q.3	Solve any **two** questions out of three. (10 marks each)	20		
a)	i) Explain the OSI Reference Model (7M) ii) Which internetworking device used in each layer? Explain with its function(3M)		CO1	U
b)	Given: Data (D): 11010011101100 and Generator (G): 1011. 1. Compute the CRC remainder. 2. Give the transmitted codeword (data + CRC). 3. Verify that the codeword divides with zero remainder.		CO3	Ap
c)	Given: Total length = 3000 bytes, Header length is 20 bytes, MTU is 1000 bytes. Find the Number of fragments, Offset & sizes		CO4	Ap
Q.4	Solve any **two** questions out of three. (10 marks each)	20		

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a)	Write a short note on HTTP and explain HTTPs	CO6	U
b)	Explain the function of the following Protocols - ARP, RARP, ICMP, IGMP	CO4	U
c)	Explain the TCP flow control mechanism.	CO5	U

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